



**LOUISIANA STATE UNIVERSITY**


**HEALTH SCIENCES CENTER**

**Lions Eye 1st floor AV equipment**

**ITB# 002670**

**Tuesday, February 28, 2023 @ 2:00PM (central)**

# Invitation to Bid

<b>LSUHSC New Orleans</b>				BIDS WILL BE PUBLICLY OPENED:  <b>February 28, 2023    02:00 PM</b>	
VENDOR NO. : SOLICITATION : <b>002670</b> OPENING DATE : <b>02/28/2023</b>		Return Sealed Bid to: Purchasing Department 433 Bolivar St New Orleans LA 70112		<b>BUYER : Defourneaux, Patrick M</b> <b>BUYER PHONE : 504/568-2947</b> <b>DATE ISSUED : 02/01/2023</b> <b>REQ. NO :</b> <b>FISCAL YEAR : 0</b>	
Lions Eye 1st floor AV					
To be Completed by Vendor:					
BUSINESS NAME _____ ADDRESS _____ TAX ID NUMBER _____					
_____ % CASH DISCOUNT FOR PROMPT PAYMENT IF MADE WITHIN THIRTY 30 DAYS. CASH DISCOUNTS FOR LESS THAN 30 DAYS OR LESS THAN 1% WILL BE ACCEPTED, BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS. ON INDEFINITE QUANTITY TERM CONTRACTS, CASH DISCOUNTS WILL BE ACCEPTED AND TAKEN BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS.					
INSTRUCTION TO BIDDERS					
1. READ THE ENTIRE BID (INCLUDING ALL TERMS AND CONDITIONS AND SPECIFICATIONS). DIVERSE SUPPLIER (A) SUPPLIER UNDERSTANDS THAT LSU, AS THE STATE'S FLAGSHIP UNIVERSITY, HAS AN INTEREST IN PROVIDING ENTREPRENEURIAL OPPORTUNITIES TO DIVERSITY-OWNED BUSINESSES. THE UNIVERSITY IS DEDICATED TO PROMOTING THE GROWTH AND DEVELOPMENT OF MINORITY, WOMEN, AND SMALL AND HISTORICALLY UNDERUTILIZED BUSINESSES ("DIVERSE BUSINESSES") BY PROVIDING OPPORTUNITIES TO PARTICIPATE IN UNIVERSITY CONTRACTS. (B) IN SUPPORT OF THIS COMMITMENT, THE SUPPLIER SHALL USE GOOD FAITH AND BEST EFFORTS TO PROVIDE OPPORTUNITIES TO DIVERSE BUSINESSES THAT ARE EITHER CERTIFIED BY THE STATE OR ANOTHER CERTIFYING AGENCY IN A DIVERSE CATEGORY, AS A SUBCONTRACTOR OR SUPPLIER UNDER THIS AGREEMENT. (C) IF APPLICABLE, SUPPLIER SHALL PROVIDE LSU WITH A LIST OF DIVERSITY-OWNED BUSINESSES DURING EACH CONTRACT YEAR, THE LIST OF BUSINESSES SHOULD IDENTIFY: (1) THE NAME OF THE BUSINESS; (2) ITS PRINCIPAL OFFICE OR ADDRESS; (3) THE OWNER(S); AND (4) THE SERVICES OR GOODS THAT IT MAY PROVIDE OR SUPPLY AND THE VALUE OF THE GOODS OR SERVICES PROCURED FROM THE BUSINESSES INCLUDED ON SUPPLIER'S LIST. (D) TO THE EXTENT THAT ANY FEDERAL OR STATE LAW, RULE, OR REGULATION WOULD REQUIRE THAT THIS SECTION BE MODIFIED OR VOIDED, THE PARTIES AGREE THAT SUCH PROVISION CAN BE AMENDED OR SEVERED FROM THE AGREEMENT WITHOUT AFFECTING ANY OF THE OTHER TERMS OF THE AGREEMENT.					
2. ALL BID PRICES MUST BE TYPED OR WRITTEN IN INK. ANY CORRECTIONS, ERASURES OR OTHER FORMS OF ALTERATION TO UNIT PRICES SHOULD BE INITIALIZED BY THE BIDDER.					
3. THIS BID IS TO BE MANUALLY SIGNED IN INK BY A PERSON AUTHORIZED TO BIND THE VENDOR (See No.9).					
VENDOR PHONE NUMBER:		TITLE		DATE	
FAX NUMBER:					
SIGNATURE OF AUTHORIZED BIDDER (MUST BE SIGNED)			NAME OF BIDDER (TYPED OR PRINTED)		

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<b>STANDARD TERMS &amp; CONDITIONS</b>	Page 2 of 10
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4. BID PRICES SHALL INCLUDE DELIVERY OF ALL ITEMS F.O.B. DESTINATION OR AS OTHERWISE PROVIDED. BIDS CONTAINING "PAYMENT IN ADVANCE" OR "C.O.D." REQUIREMENTS MAY BE REJECTED. PAYMENT IS TO BE MADE WITHIN 30 DAYS AFTER RECEIPT OF A PROPERLY EXECUTED INVOICE THAT IS APPROVED BY LSUHSC OR DELIVERY, WHICHEVER IS LATER.

5. DESIRED DELIVERY: 10 DAYS AFTER RECEIPT OF ORDER, UNLESS SPECIFIED ELSEWHERE.

6. TO ASSURE CONSIDERATION OF YOUR BID, SEE HEADER FOR RETURN INSTRUCTIONS. ALL BIDS AND ADDENDA SHOULD BE RETURNED IN AN ENVELOPE OR PACKAGE AND CLEARLY ENDORSED WITH THE BID OPENING DATE, BID OPENING TIME, BID NUMBER, AND BID TITLE. ALL REQUEST FOR QUOTATIONS AND ADDENDA SHOULD BE SUBMITTED VIA FAX, EMAIL OR PLACED IN AN ENVELOPE AND DELIVERED.

7. BIDS SUBMITTED ARE SUBJECT TO PROVISIONS OF THE LAWS OF THE STATE OF LOUISIANA INCLUDING BUT NOT LIMITED TO L.R.S. 39:1551-1736; PURCHASING RULES AND REGULATIONS; EXECUTIVE ORDERS; STANDARD TERMS AND CONDITIONS; SPECIAL CONDITIONS; AND SPECIFICATIONS LISTED IN THIS SOLICITATION.

PROHIBITION OF DISCRIMINATORY BOYCOTTS OF ISRAEL:

IN ACCORDANCE WITH EXECUTIVE ORDER NUMBER JBE 2018-15, EFFECTIVE MAY 22, 2018, FOR ANY CONTRACT FOR \$100,000 OR MORE AND FOR ANY CONTRACTOR WITH FIVE OR MORE EMPLOYEES, CONTRACTOR, OR ANY SUBCONTRACTOR, SHALL CERTIFY IT IS NOT ENGAGING IN A BOYCOTT OF ISRAEL, AND SHALL, FOR THE DURATION OF THIS CONTRACT, REFRAIN FROM A BOYCOTT OF ISRAEL. THE STATE RESERVES THE RIGHT TO TERMINATE THIS CONTRACT IF THE CONTRACTOR, OR ANY SUBCONTRACTOR, ENGAGES IN A BOYCOTT OF ISRAEL DURING THE TERM OF THE CONTRACT.

8. IMPORTANT:

BY SIGNING THIS BID, THE BIDDER CERTIFIES COMPLIANCE WITH ALL INSTRUCTIONS TO BIDDERS, TERMS, CONDITIONS, AND SPECIFICATIONS AND FURTHER CERTIFIES THAT THIS BID IS MADE WITHOUT COLLUSION OR FRAUD. ALL BID INFORMATION SHALL BE MADE WITH INK OR TYPEWRITTEN.

9. SIGNATURE AUTHORITY:

SUBMIT EVIDENCE WITH THE BID OR UPON REQUEST

R.S. 39:1594 (C) (4) EVIDENCE OF AGENCY, CORPORATE, OR PARTNERSHIP AUTHORITY SHALL BE REQUIRED FOR SUBMISSION OF A BID TO PURCHASING AGENCIES OF THE STATE OF LOUISIANA.

THE AUTHORITY OF THE SIGNATURE OF THE PERSON SUBMITTING THE BID SHALL BE DEEMED SUFFICIENT AND ACCEPTABLE IF ANY OF THE FOLLOWING CONDITIONS ARE MET:

(A) THE SIGNATURE ON THE BID IS THAT OF ANY CORPORATE OFFICER LISTED ON THE MOST CURRENT ANNUAL REPORT ON FILE WITH THE SECRETARY OF STATE, OR THE SIGNATURE ON THE BID IS THAT OF ANY MEMBER OF A PARTNERSHIP OR PARTNERSHIP IN COMMENDAM LISTED IN THE MOST CURRENT PARTNERSHIP RECORDS ON FILE WITH THE SECRETARY OF STATE.

(B) THE SIGNATURE ON THE BID IS THAT OF AN AUTHORIZED REPRESENTATIVE OF THE CORPORATION, PARTNERSHIP, OR OTHER LEGAL ENTITY AND THE BIDDER SUBMITS OR PROVIDES UPON REQUEST A CORPORATE RESOLUTION, CERTIFICATION AS TO THE CORPORATE PRINCIPAL, OR OTHER DOCUMENTS INDICATING AUTHORITY WHICH ARE ACCEPTABLE TO THE PUBLIC ENTITY, INCLUDING REGISTRATION ON AN ELECTRONIC INTERNET DATABASE MAINTAINED BY THE PUBLIC ENTITY.

(C) THE CORPORATION, PARTNERSHIP, OR OTHER LEGAL ENTITY HAS FILED IN THE APPROPRIATE RECORDS OF THE SECRETARY OF STATE IN WHICH THE PUBLIC ENTITY IS LOCATED, AN AFFIDAVIT, RESOLUTION, OR OTHER ACKNOWLEDGED OR

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AUTHENTIC DOCUMENT INDICATING THE NAMES OF ALL PARTIES AUTHORIZED TO SUBMIT BIDS FOR PUBLIC CONTRACTS. SUCH DOCUMENT ON FILE WITH THE SECRETARY OF STATE SHALL REMAIN IN EFFECT AND SHALL BE BINDING UPON THE PRINCIPAL UNTIL SPECIFICALLY RESCINDED AND CANCELED FROM THE RECORDS OF THE RESPECTIVE OFFICES.

IT IS ACCEPTABLE FOR THE SIGNATURE ON THE BID TO BE LISTED AS A VENDOR CONTACT ON LAPAC (LOUISIANA PROCUREMENT AND CONTRACT NETWORK)

10. INQUIRIES:  
ADDRESS ALL INQUIRIES AND CORRESPONDENCE TO THE BUYER AT THE PHONE NUMBER AND ADDRESS SHOWN ABOVE.

11. BID FORMS:  
ALL WRITTEN BIDS, UNLESS OTHERWISE PROVIDED FOR, MUST BE SUBMITTED ON, AND IN ACCORDANCE WITH FORMS PROVIDED AND PROPERLY SIGNED. BIDS SUBMITTED IN THE FOLLOWING MANNER WILL NOT BE ACCEPTED:

- A. BID CONTAINS NO SIGNATURE INDICATING INTENT TO BE BOUND
- B. BID FILLED OUT IN PENCIL; AND
- C. BID NOT SUBMITTED PER THE SOLICITATION DOCUMENT.

BIDS MUST BE RECEIVED AT THE ADDRESS SPECIFIED IN THE SOLICITATION PRIOR TO BID OPENING TIME IN ORDER TO BE CONSIDERED.

12. STANDARDS OR QUALITY:  
ANY PRODUCT OR SERVICE BID SHALL CONFORM TO ALL APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS AND THE SPECIFICATIONS CONTAINED IN THE SOLICITATION. UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION, ANY MANUFACTURER'S NAME, TRADE NAME, BRAND NAME, OR CATALOG NUMBER USED IN THE SPECIFICATION IS FOR THE PURPOSE OF DESCRIBING THE STANDARD OF QUALITY, PERFORMANCE, AND CHARACTERISTICS DESIRED AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION. BIDDER MUST SPECIFY THE BRAND AND MODEL NUMBER OF THE PRODUCT OFFERED IN HIS/HER BID. BIDS NOT SPECIFYING BRAND AND MODEL NUMBER SHALL BE CONSIDERED AS OFFERING THE EXACT PRODUCTS SPECIFIED IN THE SOLICITATION. LSUHSC RESERVES THE RIGHT TO INSPECT AND TEST THE DELIVERED ITEMS FOR COMPLIANCE WITH THE BID SPECIFICATIONS. IF THE ITEM FAILS TO MEET THE SPECIFICATIONS, THE COST OF TEST AND INSPECTION WILL BE PAID BY THE CONTRACTOR. IF THE ITEM IS IN COMPLIANCE, COST OF ALL TESTS WILL BE PAID BY LSUHSC.

13. DESCRIPTIVE INFORMATION:  
BIDDERS PROPOSING AN EQUIVALENT BRAND OR MODEL SHOULD SUBMIT WITH THE BID, INFORMATION (SUCH AS ILLUSTRATIONS, DESCRIPTIVE LITERATURE, AND TECHNICAL DATA) SUFFICIENT FOR LSUHSC TO EVALUATE QUALITY, SUITABILITY, AND COMPLIANCE WITH THE SPECIFICATIONS IN THE SOLICITATION. FAILURE TO SUBMIT DESCRIPTIVE INFORMATION MAY CAUSE BID TO BE REJECTED. ANY CHANGE MADE TO A MANUFACTURER'S PUBLISHED SPECIFICATION SUBMITTED FOR A PRODUCT SHALL BE VERIFIABLE BY THE MANUFACTURER. IF ITEM(S) BID DO NOT FULLY COMPLY WITH SPECIFICATIONS (INCLUDING BRAND AND/OR PRODUCT NUMBER), BIDDER MUST STATE IN WHAT RESPECT ITEMS(S) DEVIATE. FAILURE TO NOTE EXCEPTIONS ON THE BID FORM WILL NOT RELIEVE THE SUCCESSFUL BIDDER(S) FROM SUPPLYING THE ACTUAL PRODUCTS REQUESTED.

14. BID OPENING:  
BIDDERS MAY ATTEND THE BID OPENING, BUT NO INFORMATION OR OPINIONS CONCERNING THE ULTIMATE CONTRACT AWARD WILL BE GIVEN AT THE BID OPENING OR DURING THE EVALUATION PROCESS. BIDS MAY BE EXAMINED WITHIN 72 HOURS AFTER BID OPENING. INFORMATION PERTAINING TO COMPLETED FILES MAY BE SECURED BY VISITING LSUHSC DURING NORMAL

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WORKING HOURS. WRITTEN BID TABULATIONS WILL NOT BE FURNISHED.

15. AWARDS:  
AWARD WILL BE MADE TO THE LOWEST RESPONSIBLE AND RESPONSIVE BIDDER. LSUHSC RESERVES THE RIGHT TO AWARD ITEMS SEPARATELY, GROUPED, OR ON AN ALL OR NONE BASIS , AND TO REJECT ANY OR ALL BIDS AND WAIVE ANY INFORMALITIES.

16. PRICES:  
UNLESS OTHERWISE SPECIFIED BY LSUHSC IN THE SOLICITATION, BID PRICES MUST BE COMPLETE, INCLUDING TRANSPORTATION PREPAID BY BIDDER TO DESTINATION AND FIRM FOR ACCEPTANCE FOR A MINIMUM OF 30 DAYS. IF ACCEPTED, PRICES MUST BE FIRM FOR THE CONTRACTUAL PERIOD. BIDS OTHER THAN F.O.B. DESTINATION MAY BE REJECTED. PRICES SHOULD BE QUOTED IN THE UNIT (EACH, BOX, CASE, ETC.) AS SPECIFIED IN THE SOLICITATION.

17. TAXES:  
VENDOR IS RESPONSIBLE FOR INCLUDING ALL APPLICABLE TAXES IN THE BID PRICE. LSUHSC AGENCIES ARE EXEMPT FROM ALL STATE AND LOCAL SALES AND USE TAXES.

18. NEW PRODUCTS:  
UNLESS SPECIFICALLY CALLED FOR IN THE SOLICITATION, ALL PRODUCTS FOR PURCHASE MUST BE NEW, NEVER PREVIOUSLY USED, AND THE CURRENT MODEL AND/OR PACKAGING. NO REMANUFACTURED, DEMONSTRATOR, USED OR IRREGULAR PRODUCT WILL BE CONSIDERED FOR PURCHASE UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION. THE MANUFACTURER'S STANDARD WARRANTY WILL APPLY UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION.

19. CONTRACT RENEWALS:  
UPON AGREEMENT OF LSUHSC AND THE CONTRACTOR , A TERM CONTRACT MAY BE EXTENDED FOR 4 (FOUR) ADDITIONAL 12 MONTH PERIODS AT THE SAME PRICES, TERMS AND CONDITIONS. IN SUCH CASES, THE TOTAL CONTRACT TERM CANNOT EXCEED 60 MONTHS. RS 39:1615

20. CONTRACT CANCELLATION:  
TERMINATION FOR NONCOMPLIANCE:  
LSUHSC HAS THE RIGHT TO CANCEL ANY CONTRACT, IN ACCORDANCE WITH PURCHASING RULES AND REGULATIONS, FOR CAUSE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:  
(1) FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE CONTRACT;  
(2) FAILURE OF THE PRODUCT OR SERVICE TO MEET SPECIFICATIONS, CONFORM TO SAMPLE QUALITY OR TO BE DELIVERED IN GOOD CONDITION;  
(3) MISREPRESENTATION BY THE CONTRACTOR;  
(4) FRAUD, COLLUSION , CONSPIRACY OR OTHER UNLAWFUL MEANS OF OBTAINING ANY CONTRACT WITH THE STATE;  
(5) CONFLICT OF CONTRACT PROVISIONS WITH CONSTITUTIONAL OR STATUTORY PROVISIONS OF STATE OR FEDERAL LAW;  
(6) ANY OTHER BREACH OF CONTRACT.  
FURTHER, LSUHSC MAY TERMINATE THIS CONTRACT FOR CAUSE BASED UPON THE FAILURE OF THE CONTRACTOR TO COMPLY WITH THE TERMS AND/OR CONDITIONS OF THE CONTRACT; PROVIDED THAT LSUHSC SHALL GIVE THE CONTRACTOR WRITTEN NOTICE SPECIFYING THE FAILURE. IF WITHIN THIRTY (30) DAYS AFTER RECEIPT OF SUCH NOTICE, THE CONTRACTOR SHALL NOT HAVE EITHER CORRECTED SUCH FAILURE OR, IN THE CASE WHICH CANNOT BE CORRECTED IN THIRTY (30) DAYS, BEGUN IN GOOD FAITH TO CORRECT SAID FAILURE AND THEREAFTER PROCEEDED DILIGENTLY TO COMPLETE SUCH CORRECTION, THEN LSUHSC MAY, AT ITS OPTION, PLACE THE CONTRACTOR IN DEFAULT AND THE CONTRACT SHALL TERMINATE ON THE DATE

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<p>SPECIFIED IN SUCH NOTICE. THE CONTRACTOR MAY EXERCISE ANY RIGHTS AVAILABLE TO IT UNDER LOUISIANA LAW TO TERMINATE FOR CAUSE UPON THE FAILURE OF LSUHSC TO COMPLY WITH THE TERMS AND CONDITIONS OF THIS CONTRACT; PROVIDED THAT THE CONTRACTOR SHALL GIVE LSUHSC WRITTEN NOTICE SPECIFYING LSUHSC'S FAILURE AND A REASONABLE OPPORTUNITY FOR LSUHSC TO CURE THE DEFECT</p> <p>TERMINATION FOR CONVENIENCE:</p> <p>LSUHSC MAY, AT ANY TIME, TERMINATE THE CONTRACT FOR THEIR CONVENIENCE AND WITHOUT CAUSE. UPON RECEIPT OF WRITTEN NOTICE FROM LSUHSC OF SUCH TERMINATION FOR THEIR CONVENIENCE, THE CONTRACTOR SHALL: CEASE OPERATIONS AS DIRECTED BY LSUHSC IN THE NOTICE; TAKE ACTIONS NECESSARY, OR THAT LSUHSC MAY DIRECT, FOR THE PROTECTION AND PRESERVATION OF THE WORK; AND EXCEPT FOR WORK DIRECTED TO BE PERFORMED PRIOR TO THE EFFECTIVE DATE OF TERMINATION STATED IN THE NOTICE, TERMINATE ALL EXISTING SUBCONTRACTS AND PURCHASE ORDERS AND ENTER INTO NO FURTHER SUBCONTRACTS AND PURCHASE ORDERS. IN CASE OF SUCH TERMINATION FOR LSUHSC'S CONVENIENCE, THE CONTRACTOR SHALL BE ENTITLED TO RECEIVE PAYMENT FOR WORK EXECUTED. LSUHSC SHALL NOT BE RESPONSIBLE OR OTHERWISE LIABLE FOR ANY DEMOBILIZATION COSTS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM SUCH TERMINATION.</p> <p>TERMINATION FOR NON-APPROPRIATION OF FUNDS:</p> <p>THE CONTINUATION OF THIS CONTRACT IS CONTINGENT UPON THE APPROPRIATION OF FUNDS TO FULFILL THE REQUIREMENTS OF THE CONTRACT.</p> <p>21. DEFAULT OF CONTRACT:</p> <p>FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE BID WILL CONSTITUTE A DEFAULT AND MAY CAUSE CANCELLATION OF THE CONTRACT. WHERE THE UNIVERSITY HAS DETERMINED THE CONTRACTOR TO BE IN DEFAULT, THE UNIVERSITY RESERVES THE RIGHT TO PURCHASE ANY OR ALL PRODUCTS OR SERVICES COVERED BY THE CONTRACT ON THE OPEN MARKET AND TO CHARGE THE CONTRACTOR WITH COST IN EXCESS OF THE CONTRACT PRICE. UNTIL SUCH ASSESSED CHARGES HAVE BEEN PAID, NO SUBSEQUENT BID FROM THE DEFAULTING CONTRACTOR WILL BE CONSIDERED.</p> <p>22. ORDER OF PRIORITY:</p> <p>IN THE EVENT THERE IS A CONFLICT BETWEEN THE INSTRUCTIONS TO BIDDERS OR STANDARD CONDITIONS AND THE SPECIAL CONDITIONS, THE SPECIAL CONDITIONS SHALL GOVERN.</p> <p>23. APPLICABLE LAW:</p> <p>ALL CONTRACTS SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF LOUISIANA.</p> <p>24. COMPLIANCE WITH CIVIL RIGHTS LAWS:</p> <p>BY SUBMITTING AND SIGNING THIS BID, BIDDER AGREES TO ABIDE BY THE REQUIREMENTS OF THE FOLLOWING AS APPLICABLE: TITLE VI AND VII OF THE CIVIL RIGHTS ACT OF 1964, AS AMENDED BY THE EQUAL OPPORTUNITY ACT OF 1972, FEDERAL EXECUTIVE ORDER 11246, FEDERAL REHABILITATION ACT OF 1973, AS AMENDED, THE VETERAN'S READJUSTMENT ASSISTANCE ACT OF 1974, TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, THE AGE ACT OF 1975, AND BIDDER AGREES TO ABIDE BY THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT OF 1990. BIDDER AGREES NOT TO DISCRIMINATE IN ITS EMPLOYMENT PRACTICES AND WILL RENDER SERVICES UNDER ANY CONTRACT ENTERED INTO AS A RESULT OF THIS SOLICITATION WITHOUT REGARD TO RACE, COLOR, RELIGION, SEX, AGE, NATIONAL ORIGIN, POLITICAL AFFILIATION, DISABILITY, VETERAN STATUS, OR ANY OTHER NON-MERIT FACTOR. ANY ACT OF DISCRIMINATION COMMITTED BY BIDDER, OR FAILURE TO COMPLY WITH THESE STATUTORY OBLIGATIONS WHEN APPLICABLE, SHALL BE GROUNDS FOR TERMINATION OF ANY CONTRACT ENTERED INTO AS A RESULT OF THIS SOLICITATION.</p>	

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## STANDARD TERMS & CONDITIONS

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BIDDER:

### 25. SPECIAL ACCOMMODATIONS:

ANY "QUALIFIED INDIVIDUAL WITH A DISABILITY" AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT WHO HAS SUBMITTED A BID AND DESIRES TO ATTEND THE BID OPENING, MUST NOTIFY THIS OFFICE IN WRITING NOT LATER THAN SEVEN DAYS PRIOR TO THE BID OPENING DATE OF THEIR NEED FOR SPECIAL ACCOMMODATIONS. IF THE REQUEST CANNOT BE REASONABLY PROVIDED, THE INDIVIDUAL WILL BE INFORMED PRIOR TO THE BID OPENING.

### 26. INDEMNITY:

CONTRACTOR AGREES, UPON RECEIPT OF WRITTEN NOTICE OF A CLAIM OR ACTION, TO DEFEND THE CLAIM OR ACTION, OR TAKE OTHER APPROPRIATE MEASURE, TO INDEMNIFY, AND HOLD HARMLESS, LSUHSC, ITS OFFICERS, ITS AGENTS AND ITS EMPLOYEES FROM AND AGAINST ALL CLAIMS AND ACTIONS FOR BODILY INJURY, DEATH OR PROPERTY DAMAGES CAUSED BY THE FAULT OF THE CONTRACTOR, OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. CONTRACTOR IS OBLIGATED TO INDEMNIFY ONLY TO THE EXTENT OF THE FAULT OF THE CONTRACTOR, ITS OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. HOWEVER, THE CONTRACTOR SHALL HAVE NO OBLIGATION AS SET FORTH ABOVE WITH RESPECT TO ANY CLAIM OR ACTION FROM BODILY INJURY, DEATH OR PROPERTY DAMAGES ARISING OUT OF THE FAULT OF THE UNIVERSITY, ITS OFFICERS, ITS AGENTS OR ITS EMPLOYEES.

### 27. IN ACCORDANCE WITH THE PROVISIONS OF (RS 39:2192):

IN AWARDED CONTRACTS, ANY PUBLIC ENTITY IS AUTHORIZED TO REJECT THE LOWEST BID FROM, OR NOT AWARD THE CONTRACT TO, A BUSINESS IN WHICH ANY INDIVIDUAL WITH AN OWNERSHIP INTEREST OF FIVE PERCENT OR MORE HAS BEEN CONVICTED OF, OR HAS ENTERED A PLEA OF GUILTY OR NOLO CONTENDERE TO ANY STATE FELONY CRIME OR EQUIVALENT FEDERAL FELONY CRIME COMMITTED IN THE SOLICITATION OR EXECUTION OF A CONTRACT OR BID AWARDED UNDER THE LAWS GOVERNING PUBLIC CONTRACTS UNDER THE PROVISIONS OF CHAPTER 10 OF TITLE 38 OF THE LOUISIANA REVISED STATUTES OF 1950, PROFESSIONAL, PERSONAL, CONSULTING, AND SOCIAL SERVICES PROCUREMENT UNDER THE PROVISIONS OF CHAPTER 16 OF TITLE 39, OR THE LOUISIANA PROCUREMENT CODE UNDER THE PROVISIONS OF CHAPTER 17 OF TITLE 39.

### 28. CERTIFICATION OF NO SUSPENSION OR DEBARMENT:

BY SIGNING AND SUBMITTING THIS BID, THE BIDDER CERTIFIES THAT THEIR BUSINESS ENTITY, ANY SUBCONTRACTORS OR PRINCIPALS ARE NOT SUSPENDED OR DEBARRED BY EITHER THE DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF INSPECTOR GENERAL (OIG) OR THE GENERAL SERVICES ADMINISTRATION (GSA) IN ACCORDANCE WITH THE REQUIREMENTS IN "AUDIT REQUIREMENTS IN SUBPART F OF THE OFFICE OF MANAGEMENT AND BUDGET'S UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS."

A LIST OF PARTIES WHO HAVE BEEN SUSPENDED OR DEBARRED CAN BE VIEWED VIA THE INTERNET AT [HTTPS://SAM.GOV](https://sam.gov)

IF AT ANY TIME DURING THE TERM OF THE CONTRACT AWARDED AS A RESULT OF THIS INVITATION TO BID, THIS ENTITY OR ANY OF ITS EMPLOYEES OR SUBCONTRACTORS APPEARS ON EITHER LISTING, THIS ENTITY WILL NOTIFY THE CONTRACTING AGENCY, AND THE CONTRACT WILL BE TERMINATED. THE CONTRACTING AGENCY WILL NOT BE LIABLE FOR ANY DAMAGES RESULTING FROM SAID TERMINATION.

### 29. FEDERAL CLAUSES (IF APPLICABLE):

ANTI-KICKBACK CLAUSE. THE CONTRACTOR HEREBY AGREES TO ADHERE TO THE MANDATE DICTATED BY THE COPELAND "ANTI-KICKBACK" ACT WHICH PROVIDES THAT EACH CONTRACTOR OR SUB GUARANTEE SHALL BE PROHIBITED FROM INDUCING BY ANY MEANS, ANY PERSON EMPLOYED IN THE COMPLETION OF WORK, TO GIVE UP ANY PART OF THE COMPENSATION TO WHICH HE IS OTHERWISE ENTITLED.

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<p>CLEAN AIR ACT: THE CONTRACTOR HEREBY AGREES TO ADHERE TO THE PROVISIONS WHICH REQUIRE COMPLIANCE WITH ALL APPLICABLE STANDARDS, ORDERS OR REQUIREMENTS ISSUED UNDER SECTION 306 OF THE CLEAN WATER ACT, WHICH PROHIBITS THE USE UNDER NON-EXEMPT FEDERAL CONTRACTS, GRANTS, OR LOANS OF FACILITIES INCLUDED ON THE EPA LIST OF VIOLATING FACILITIES.</p> <p>ENERGY POLICY AND CONSERVATION ACT: THE CONTRACTOR HEREBY RECOGNIZES THE MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE STATE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (P.L. 94-163)</p> <p>CLEAN WATER ACT: THE CONTRACTOR HERBY AGREES TO ADHERE TO THE PROVISIONS WHICH REQUIRE COMPLIANCE WITH ALL APPLICABLE STANDARDS, ORDERS, OR REQUIREMENTS ISSUED UNDER SECTION 508 OF THE CLEAN WATER ACT WHICH PROHIBITS THE USE UNDER NON-EXEMPT FEDERAL CONTRACTS, GRANTS, OR LOANS OF FACILITIES INCLUDED ON THE EPA LIST OF VIOLATING FACILITIES.</p> <p>ANTI-LOBBYING AND DEBARMENT ACT: THE CONTRACTOR WILL BE EXPECTED TO COMPLY WITH FEDERAL STATUTES REQUIRED IN THE ANTI-LOBBYING ACT AND THE DEBARMENT ACT.</p> <p>30. ADHERENCE TO JCAHO STANDARDS: WHERE APPLICABLE, LSUHSC IS ACCREDITED BY THE JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS AND AS SUCH ALL CONTRACTORS, SUBCONTRACTORS, AND VENDORS AGREE TO ADHERE TO THE APPLICABLE STANDARDS PROMULGATED BY THE COMMISSION</p> <p>31. IN ACCORDANCE WITH LOUISIANA LAW, ALL CORPORATIONS (RS 12:163) AND LIMITED LIABILITY COMPANIES (RS 12:1308.2) MUST BE IN GOOD STANDING WITH THE LOUISIANA SECRETARY OF STATE IN ORDER TO HOLD A CONTRACT WITH THE STATE.</p> <p>32. INTERPRETATION OF DOCUMENT: ANY INTERPRETATION OF THE BID OR QUOTATION DOCUMENT WILL ONLY BE MADE BY AN ADDENDUM ISSUED IN WRITING BY THE PURCHASING DEPARTMENT. SUCH ADDENDUM WILL BE MAILED OR DELIVERED TO EACH PERSON RECEIVING A SET OF THE ORIGINAL BID OR QUOTATION DOCUMENTS. LSUHSC WILL NOT BE RESPONSIBLE FOR ANY OTHER EXPLANATION OR INTERPRETATION OF THE DOCUMENTS.</p> <p>33. THIS SOLICITATION CONTAINS ALL TERMS AND CONDITIONS WITH RESPECT TO THE PURCHASE OF THE GOODS AND OR SERVICES SPECIFIED HEREIN. SUBMITTAL OF ANY CONTRARY TERMS AND CONDITIONS MAY CAUSE YOUR BID TO BE REJECTED. BY SIGNING AND SUBMITTING A BID, VENDOR AGREES THAT CONTRARY TERMS AND CONDITIONS WHICH MAY BE INCLUDED IN ITS BID ARE NULLIFIED AND AGREES THAT THIS CONTRACT SHALL BE CONSTRUED IN ACCORDANCE WITH THIS SOLICITATION.</p> <p>34. VENDORS FORMS: THE PURCHASE/RELEASE ORDER IS THE ONLY BINDING DOCUMENT TO BE ALLOWED AGAINST THIS CONTRACT. SIGNING OF VENDOR'S FORMS IS NOT ALLOWED.</p>	



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35. PUBLICIZING AWARDS:  
IN ACCORDANCE WITH L.A.C 34:I.535, UNSUCCESSFUL BIDDERS WILL BE NOTIFIED OF THE AWARD PROVIDED THEY SUBMIT WITH THEIR BID A SELF-ADDRESSED STAMPED ENVELOPE REQUESTING THIS INFORMATION.

36. PREFERENCE:  
IN ACCORDANCE WITH LOUISIANA REVISED STATUTES 39:1595, A PREFERENCE MAY BE ALLOWED FOR PRODUCTS MANUFACTURED, PRODUCED, GROWN, OR ASSEMBLED IN LOUISIANA OF EQUAL QUALITY. DO YOU CLAIM THIS PREFERENCE?

YES \_\_\_\_\_  
SPECIFY THE LINE NUMBER (S) \_\_\_\_\_  
SPECIFY LOCATION WITHIN LOUISIANA WHERE THIS PRODUCT IS MANUFACTURED, PRODUCED, GROWN OR ASSEMBLED \_\_\_\_\_  
(NOTE: IF MORE SPACE IS REQUIRED, INCLUDE ON SEPARATE SHEET.)

DO YOU HAVE A LOUISIANA BUSINESS WORK FORCE? YES \_\_\_\_\_ NO \_\_\_\_\_  
IF SO, DO YOU CERTIFY THAT AT LEAST FIFTY PERCENT (50%) OF YOUR LOUISIANA WORKFORCE IS COMPRISED OF LOUISIANA RESIDENTS?  
YES \_\_\_\_\_ NO \_\_\_\_\_  
FAILURE TO SPECIFY ABOVE INFORMATION MAY CAUSE ELIMINATION FROM PREFERENCES.  
PREFERENCES SHALL NOT APPLY TO SERVICE CONTRACTS.

37. AUDIT OF RECORDS: THE STATE LEGISLATIVE AUDITOR, FEDERAL AUDITORS, AND INTERNAL AUDITORS OF THE STATE SHALL HAVE THE RIGHT TO INSPECT AND AUDIT ALL TIMEKEEPING AND EXPENSE RECORDS OF THE CONTRACTING ENTITY OR ANY SUBCONTRACTOR OF THE CONTRACTING ENTITY TO SUBSTANTIATE AMOUNTS INVOICED BY SUPPLIER WITH RESPECT TO THIS AGREEMENT. THE RIGHTS OF INSPECTION AND AUDIT SHALL COMMENCE AS OF THE DATE OF THIS AGREEMENT AND SHALL CONTINUE FOR A PERIOD OF FIVE (5) YEARS AFTER PROJECT ACCEPTANCE OR AS REQUIRED BY APPLICABLE STATE AND FEDERAL LAW. THE CONTRACTING ENTITY AND ANY SUBCONTRACTOR OF THE CONTRACTING ENTITY SHALL MAINTAIN ALL TIMEKEEPING AND EXPENSE RECORDS RELATED TO THIS AGREEMENT FOR THE ENUMERATED FIVE (5) YEAR PERIOD.

38. CONFIDENTIALITY: CONTRACTOR SHALL PROTECT FROM UNAUTHORIZED USE AND DISCLOSURE ALL INFORMATION RELATING TO THE STATE'S OPERATIONS AND DATA (E.G. FINANCIAL, STATISTICAL, PERSONAL, TECHNICAL, ETC.) THAT BECOMES AVAILABLE TO THE CONTRACTOR IN CARRYING OUT THIS CONTRACT. CONTRACTOR SHALL USE PROTECTING MEASURES THAT ARE THE SAME OR MORE EFFECTIVE THAN THOSE USED BY THE STATE. CONTRACTOR IS NOT REQUIRED TO PROTECT INFORMATION OR DATA THAT IS PUBLICLY AVAILABLE OUTSIDE THE SCOPE OF THIS CONTRACT; ALREADY RIGHTFULLY IN THE CONTRACTOR'S POSSESSION; INDEPENDENTLY DEVELOPED BY THE CONTRACTOR OUTSIDE THE SCOPE OF THIS CONTRACT; OR RIGHTFULLY OBTAINED FROM THIRD PARTIES.

39. CYBERSECURITY TRAINING: IN ACCORDANCE WITH LA. R.S. 42:1267(B)(3) AND THE STATE OF LOUISIANA'S INFORMATION SECURITY POLICY, IF THE CONTRACTOR, ANY OF ITS EMPLOYEES, AGENTS, OR SUBCONTRACTORS WILL HAVE ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS, THE CONTRACTOR'S EMPLOYEES, AGENTS, OR SUBCONTRACTORS WITH SUCH ACCESS MUST COMPLETE CYBERSECURITY TRAINING ANNUALLY, AND THE CONTRACTOR MUST PRESENT EVIDENCE OF SUCH COMPLIANCE ANNUALLY AND UPON REQUEST. THE CONTRACTOR MAY USE THE CYBERSECURITY TRAINING COURSE OFFERED BY THE LOUISIANA DEPARTMENT OF STATE CIVIL SERVICE WITHOUT ADDITIONAL COST OR MAY USE ANY ALTERNATE COURSE APPROVED IN WRITING BY THE OFFICE OF TECHNOLOGY SERVICES.

# Invitation to Bid

STANDARD TERMS & CONDITIONS	Page 9 of 10
<b>NUMBER : 002670</b> <b>OPEN DATE : 02/28/2023      TIME: 02:00 PM</b>	<b>BIDDER:</b>
<p>FOR PURPOSES OF THIS SECTION, "ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS" MEANS THE POSSESSION OF CREDENTIALS, EQUIPMENT, OR AUTHORIZATION TO ACCESS THE INTERNAL WORKINGS OF STATE INFORMATION TECHNOLOGY SYSTEMS OR NETWORKS. EXAMPLES WOULD INCLUDE BUT NOT BE LIMITED TO STATE-ISSUED LAPTOPS, VPN CREDENTIALS TO ACCESS THE STATE NETWORK, BADGING TO ACCESS THE STATE'S TELECOMMUNICATIONS CLOSETS OR SYSTEMS, OR PERMISSIONS TO MAINTAIN OR MODIFY IT SYSTEMS USED BY THE STATE. FINAL DETERMINATION OF SCOPE INCLUSIONS OR EXCLUSIONS RELATIVE TO ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS WILL BE MADE BY THE OFFICE OF TECHNOLOGY SERVICES.</p>	

## Invitation to Bid

PRICE SHEET		Page 10 of 10
NUMBER	: 002670	BIDDER:
OPEN DATE	: 02/28/2023	TIME: 02:00 PM

**Bidder's Price Sheet**  
**Lions Eye 1st floor AV equipment #002670**

Grand Total Bid Price:

**LSU Health Sciences Center – New Orleans**

**Lions Eye 1st floor AV equipment**

Invitation to Bid # 002670

**Deadline for bid submission will be February 28, 2023 @ 2:00PM (central)**

**There will be a mandatory pre-bid meeting on February 9, 2023 @ 10:00 AM**

**SECTION 1 – BIDDING AND CONTRACT DOCUMENTS**

**1.1 Definitions:**

**Bidder** – a legal entity that submits an offer to sell to the Owner on a specified body of work. Generally where the term “Bidder” is used in the specifications, the indication is that the requirement or responsibility is associated with the bid submittal or other pre-award activities.

**Supplier** – vendor that performs the services as specified herein. The term “Supplier” can also be used in the specification as an inclusive term that references the Supplier and all persons, or other parties of interest acting on behalf of the Supplier in the performance of the contract as described in the specifications.

**1.2 Interpretation of Documents and Prior Approvals:**

If there is any doubt of the meaning of any part of the specifications, and/or desires approval of “equivalent” equipment they must submit to Patrick Defourneaux via e-mail at [pdefou@lsuhsc.edu](mailto:pdefou@lsuhsc.edu) a written request for an interpretation or prior approval not later than 12pm (central) on February 16, 2023. A response will be made by addendum issued to each bidder receiving a set of the specifications. LSUHSC will not be responsible for any other explanations or interpretation of the specifications or proposed documents.

**1.3 Pre-Bid Conference:**

A **mandatory Pre-Bid Conference** will be held on **Thursday, February 9, 2023, beginning at 10:00 AM at at Allied Health/School of Nursing Building, 1st floor, room 147 (Seminar Room 2), 1900 Gravier Street, New Orleans, LA 70112.** The purpose of the Pre-Bid Conference is to familiarize Bidders with the requirements and intent of the contract and to receive comments and information from interested Bidders. No questions will be accepted at the pre-bid meeting. All questions must be submitted in writing and will be answered via addendum.

**Attendance at the Pre-Bid Conference is required in order to submit a bid** and failure to attend will be grounds for rejection of the bid. Anyone arriving 15 minutes after the start of the meeting will be disqualified from the bid. A representative of LSUHSC will have a sign-in sheet to verify the site visit. All bidders must visit the site to determine the scope of the job.

No allowances for previously existing site conditions will be made after the bid. It is the responsibility of the bidder to thoroughly inspect the site to determine any and all factors, which will affect the bid.

Any revision of the Bidding Documents made as a result of the Pre-Bid Conference shall not be valid unless included in an addendum.

**1.4 Bidder's Representation:**

Each Bidder by his bid represents the following:

- Bidder has read and understands the Bidding Documents and his or her bid is made in accordance therewith.
- Bidder's bid is based solely upon the materials, systems and services described in the Bidding Documents as advertised and as modified by addenda.
- Bid is not based on any verbal instructions contrary to the Contract Documents and addenda

### **1.5 Bidding Procedure & Bid Submission:**

Bidders must properly complete and sign Bid, including all required attestations and addenda. Any exceptions to the attached terms and conditions or the indemnification agreement shall be presented at the time of the bid submission. Note that any exceptions may result in a disqualified bid if the aforementioned exceptions are in conflict with state guidelines governing LSUHSC. Bids must be signed by a representative of your company authorized to enter into contracts on behalf of your organization in accordance with Louisiana R.S. 39:1594.

### **These documents must be included with the bid:**

1. Signed Invitation to Bid Document
2. Completed Bidders Price Sheet
3. Supplier Quote to match
4. Certificate of Liability Insurance
5. Signed Attachment A: CERTIFICATION STATEMENT
6. Signed Attachment B: INDEMNIFICATION AGREEMENT
7. Signed Attachment C: EQUAL EMPLOYMENT OPPORTUNITY CLAUSE
8. Signed Attachment D: AFFIRMATIVE ACTION COMPLIANCE
9. Addenda requiring a signature (if any are issued)

### **All bids are due by 2:00 PM central, Tuesday, February 28, 2023**

at 433 Bolivar Street, Room 623 (Purchasing Department), New Orleans, LA 70112.

### **Late bids will not be accepted and will be returned unopened.**

It is the bidder's responsibility to make sure bids are delivered before the bid opening.

Fax or e-mail bids will not be accepted.

Delays by mail, traffic, or any other reason will be at the bidders own risk.

Submitted sealed bids must be time stamped in our office before 2:00pm on the day listed above.

The bid package must be delivered at the Bidder's expense to:

Patrick Defourneaux  
Procurement Analyst, LSU Health Sciences Center  
433 Bolivar St.  
6th Floor, Purchasing Dept - Room 623  
New Orleans, LA 70112  
Office phone: 504-568-2947  
Email: [pdefou@lsuhsc.edu](mailto:pdefou@lsuhsc.edu)

### **BIDS SHALL BE DELIVERED IN A SEALED ENVELOPE WITH THE BID NUMBER CLEARLY MARKED ON THE OUTSIDE OF THE ENVELOPE.**

In accordance with R.S. 39:1581, Chapter 5, Section 521C of the Louisiana State Purchasing Rules and Regulations, when an error is made in extending total prices, the unit bid price will govern.

Award: LSUHSC-NO will award to the lowest responsive and responsible bidder based on the unit pricing of any and all items.

### **1.6 Calendar of Events:**

<b><u>Event</u></b>	<b><u>Date</u></b>
ITB Announcement	February 2, 2023
Mandatory Pre-Bid Meeting 10am	February 9, 2023
Written Inquiry/Substitute Equipment Prior Approval (12:00pm central)	February 16, 2023
Issue Responses to Provider Inquiries	February 17, 2023
Bid Submission Deadline (2:00pm central)	February 28, 2023
Bid Award & Notification	March 1, 2023

NOTE: LSUHSC reserves the right to amend and/or change this schedule of ITB activities, as it deems necessary.

### **1.7 Minimum Insurance Requirements:**

Selected bidder(s) shall maintain the following minimum insurance coverage throughout the duration of the contract:

- Commercial General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage.
- Automobile Liability: \$1,000,000 combined single limit per accident, for bodily injury and property damage.
- Workers Compensation and Employers Liability: Workers' Compensation limits as required by the Labor Code of the State of Louisiana and Employers Liability coverage. Exception: Employers liability limit is to be \$1,000,000 when work is to be over water and involves maritime exposure.

A Certificate of Liability Insurance must be provided with bid. For further insurance requirements and provisions, see Attachment E – Insurance Requirements.

### **1.8 Compliance with Applicable Laws and Regulations:**

Supplier shall perform all requirements under this contract in strict observance of and in compliance with all applicable laws, regulations, ordinances, codes and any other legislative or statutory requirements. Supplier warrants the performance of services under this contract shall be fully compliant with the current requirements of the Occupational Safety and Health Act (OSHA) to include as it may be amended throughout the term of this contract. Supplier shall take precautions to insure work is performed in compliance with occupational safety standards. Supplier shall obtain all permits and licenses and pay all taxes, charges and fees necessary to perform the services under this contract.

### **1.9 Resolving Contract Disputes:**

State statute requires that disputes arising under this contract not be resolved in a forum outside of Louisiana. Requiring contract disputes to be resolved in a forum outside of this state or requiring their interpretation to be governed by the laws of another jurisdiction, are inequitable and against the public policy of this state.

### **1.10 Late Payment Policy:**

State statute RS 39:1695 requires that if a state agency fails to make any payment within 90 days of the due date, that agency shall pay, in addition to the payment, interest on the amount due at the rate established pursuant to Civil Code Article 2824 (B) (3) per year, from the 91<sup>st</sup> day after the due date.

## **SECTION 2 – SCOPE (GENERAL)**

LSU Health New Orleans (LSUHNO) requests bids for the Lion's Eye Center (LEC) First Floor Audio/Visual Upgrade as specified in this scope of work.

Bidders must list the Grand Total Bid Price on the Price Sheet (page10) and must provide a matching quote for entire project including installation, labor, and any other costs or fees associated with this project.

The parts list attached is not meant to be an exhaustive list of all necessary parts, but includes all major components needed to achieve the desired functionality; the integrator is responsible for providing all components for the system not specified in this document as OFE (Owner Furnished Equipment) to complete a functioning system. The integrator is responsible for providing specifications for power, data, conduit, and floor penetration(s). The integrator is also responsible for field verification of all dimensions during the installation process. A one-line drawing of the system design must be submitted to LSUHNO for comments and revisions before installation.

This document and the Parts List associated with this project supersedes any other documents which describe general standards as dictated by LSUHNO. Any question on this or any part of the bid must be submitted as detailed in the bid documents.

All installation must be performed following the manufacturer's specifications.

### **Control**

The entire system must be controlled with a Crestron VC-4-ROOM license running on the LSUHSC VC-4 server (OFE). The user interface for the control system will be a Crestron TSW-770-X-S touch panel (color TBD). The user interface design must be coordinated with and approved by LSUHNO. The system shall take advantage of all functionality offered by the Crestron control system including but not limited to:

- Projector Power Control
- Volume Control
- Screen Control
- Source Switching
- Hide Picture on/off
- Mute mic on/off
- The ability to send an e-mail help request to the LSUHNO Enterprise A/V Group from the touch panel
- Crestron's X-Panel web-based control
- Crestron Mobility Project must also be configured for use by LSUHNO

All NVX endpoints will be managed by the Crestron DM-NVX-DIR-ENT (OFE). The integrator must program the system to utilize the Director for video and audio routing as specified and approved by LSUHNO.

All devices will be controlled using IP control unless otherwise required.

## **Lectern and Rack**

The lectern used for this project must be a Marshall Furniture custom lectern (MFI# 37995RC). The lectern will house the following devices:

- Crestron DM-NVX-351 Encoder/Decoder
- All-In-One Lectern PC (OFE)
- Crestron AM-3200
- Shure SBC200
- Shure SB900B (x6)
- Furman M-8x2 power conditioner
- Middle Atlantic rack drawer

The Crestron TT-100 will house an HDMI pass through cable for laptops (see below) and one Ethernet cable connected to the LSU.

There will be a rack room adjacent to the main room that will house a Middle Atlantic 42U rack cabinet (OFE). This cabinet will house the following equipment:

- QSC Core Nano audio processor
- Shure ULXD4Q receiver
- Furman M-8x2 power conditioner
- Middle Atlantic rack drawer
- Crestron TSW-1070 touch screen

## **Video**

The two HDMI inputs of the DM-NVX-351 in the lectern will receive input from either AIO lectern PC (OFE) or the Crestron AM-3200. The HDMI input of the AM-3200 will be connected to an HDMI cable that will be pulled into the TT-100 to be used as a laptop input. The streamed output of the DM-NVX-351 will be routed to the DM-NVX-360 located at the Christie DWU860-iS projector mounted from the ceiling. The HDMI output of the DM-NVX-360 will be connected to the Christie projector's HDMI input.

All DM-NVX endpoints will use PoE.

The screen will be a Draper 133" motorized screen. The low voltage control of the screen will be achieved with the Crestron VC-4 instance through the Global Cache IP2CC device.

## **Audio**

A QSC Core Nano will be used for audio. All audio will be routed using Dante and AES76.

Inputs:

- DM-NVX-351 for program audio
- Shure QLXD4Q receiver for the microphones

Outputs:



- Shure MXN5W-C networked speakers

The integrator will create a simplified audio control interface for use by LSUHNO. It will be created in consultation with and with approval from LSUHNO.

The integrator will set up multiple audio zones as directed by LSUHNO. The touch screen in the rack will control these zone selections.

### **NVX Networking**

The integrator will connect the NVX endpoints to a Cisco Catalyst 3850 48 port switch (OFE) provided and configured by LSUHNO. The switch will be configured and managed by the LSUHNO Enterprise Network Group. Cabling for the NVX endpoints from the network closet to this room and the rack room will be provided and installed by LSUHNO.

Patch panels in the rack and jacks in the room will be provided and installed by LSUHNO.

### **Conclusion**

Included in the bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period.

Once the installation is complete, a demo and installation review and any relevant training must be rendered to representatives chosen by LSUHNO.

All cables which run through ceiling spaces **must** be **plenum** rated. All cables connected to Crestron DM devices must be Crestron certified. All cables must include a minimum of a 10% service loop. No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the rack. LSUHNO is a Crestron A+ Partner and must receive pricing at or below the A+ Partner pricing.

[illegible]

**ATTACHMENT A: CERTIFICATION STATEMENT**

**OFFICIAL CONTACT.** The State requires that the Provider designate one person to receive all documents and the method in which the documents are best delivered. Identify the Contact name and fill in the information below: (Print Clearly):

Date: \_\_\_\_\_ Official Contact Name: \_\_\_\_\_

A. E-mail Address: \_\_\_\_\_

B. Facsimile Number with area code: (\_\_\_\_) \_\_\_\_\_

C. US Mail Address: \_\_\_\_\_

D. Telephone Number: \_\_\_\_\_

Provider certifies that the above information is true and grants permission to the State or Agencies to contact the above named person or otherwise verify the information I have provided.

By its submission of this proposal and authorized signature below, Provider certifies that:

- (1) The information contained in its response to this RFQ is accurate;
- (2) Provider warrants that, to the best of his/her/its knowledge and belief, there are no relevant facts which could give rise to organizational conflicts of interest or that the Provider has disclosed all potential or actual organizational conflicts of interest. The Provider agrees that if it becomes the Selected Provider and an organizational conflict of interest with respect to this contract is then discovered, an immediate and full disclosure in writing shall be made to the LSUHSC-NO which shall include a description of the action which the Provider has taken or will take to avoid or mitigate such conflicts. In the event that the successful Provider knowingly failed to disclose a conflict, LSUHSC-NO may immediately terminate the contract for default. Provider certifies that its personnel, who perform work under this contract, have been informed of their obligations to report personal and organizational conflicts of interest to the Provider. The term of this prohibition shall endure for the entire period of this contract and for two (2) years thereafter.
- (3) Provider complies with each of the mandatory requirements listed in the RFQ and will meet or exceed the deliverables specified therein;
- (4) Provider accepts the procedures, contract terms and conditions, and all other administrative requirements set forth in this RFQ.
- (5) Provider's quote is valid for at least thirty (30) days from the date of Provider's signature below;
- (6) Proposer certifies and agrees that the following information is correct: In preparing its response, the Proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. Proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. The State reserves the right to reject the response of the proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.

Authorized Signature: \_\_\_\_\_

Typed or Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip: \_\_\_\_\_

\_\_\_\_\_  
SIGNATURE of Provider's Authorized Representative

\_\_\_\_\_  
DATE

## **ATTACHMENT B - INDEMNIFICATION AGREEMENT**

The Selected Provider/Subsupplier agrees to protect, defend, indemnify, save, and hold harmless LSUHSC-NO, State of Louisiana, all State Departments, Boards, and Commissions, officers, agents, servants, and employees, including volunteers, from and against any and all claims, demands, expense, and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur or in any way grow out of any act or omission of Selected Provider/Subsupplier, its agents, servants, and employees or any and all costs, expense, and/or attorney fees incurred by Selected Provider/Subsupplier, as a result of any claims, demands, and/or causes of action except of those claims, demands, and/or causes of action arising out of the negligence of LSUHSC-NO, State of Louisiana, all State Departments, Boards, Commissions, its agents, representatives, and/or employees. Selected Provider/ Subsupplier agrees to investigate, handle, respond to, provide defense for and defend any such claim, demand, or suit at its sole expense and agrees to bear all other costs and expenses related thereto, even if any such claim, demand, or suit is groundless, false, or fraudulent.

LSUHSC-NO shall not be responsible or held liable for any injury or damage to persons or property resulting from the use, misuse, or failure of any equipment used by the Selected Provider or any of the Selected Provider's agents, servants, or employees, even if such equipment is furnished by LSUHSC-NO to the Selected Provider. The acceptance or use of any such equipment by the Selected Provider shall be construed to mean that the Selected Provider accepts full responsibility for, and agrees to indemnify and to defend LSUHSC-NO against any and all loss, liability, and claims for any injury or damage whatsoever resulting from the use, misuse, or failure of such equipment, whether such damage or injury is to an employee, agent, or servant, or the property of the Selected Provider, other suppliers or subsuppliers, LSUHSC-NO, or other persons.

Accepted by: Company \_\_\_\_\_

Name \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Is Certificate of Insurance Attached? \_\_\_\_\_ Yes \_\_\_\_\_ No

## **ATTACHMENT C: EQUAL EMPLOYMENT OPPORTUNITY CLAUSE**

As required by U.S. Labor Department, Office of Federal Contract Compliance, Section 60-1.4.

During the performance of this contract, the successful bidder (service provider or vendor) agrees as follows:

- (1) The Service provider will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Service provider will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Service provider agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting offer setting forth the provision of this non-discrimination clause.
- (2) The Service provider will, in all solicitations or advertisements for employees placed by or on behalf of the Service provider, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- (3) The Service provider will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the Service provider's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The Service provider will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The Service provider will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access of his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of the Service provider's noncompliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the Service provider may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The Service provider will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subservice provider or vendor. The Service provider will take such action with respect to any subcontract or purchase order as the contracting agency may use direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the Service provider becomes involved in, or is threatened with, litigation with the subservice provider or vendor as a result of such direction by the contracting agency, the Service provider may request the United States to enter into such litigation to protect the interests of the United States.

### **Assurance**

The bidder (offeror or applicant) assures Board of Supervisors of Louisiana State University and Agricultural and Mechanical College that he does not and will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not and will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder (offeror or applicant) understands that the phrase "segregated facilities" includes facilities which are in fact segregated on a basis of race, color, creed, or national origin, because of habit, local custom, or otherwise. The bidder (offeror or applicant) understands and agrees that maintaining or providing segregated facilities for his employees or permitting his employees to perform their services at any locations, under his control, where segregated facilities are maintained is a violation of the equal opportunity clause required by Executive Order 11246 of September 24, 1965.

The bidder (offeror or applicant) further understands and agrees that a breach of the assurance herein contained subjects him to the provisions of Orders of the Secretary of Labor dated May 9, 1967, and the provisions of Orders of the Secretary of Labor dated May 9, 1967, and the provisions of equal opportunity clause enumerated in contract between Board of Supervisors of Louisiana State University and Agricultural and Mechanical College and bidder (offeror or applicant).

Whoever knowingly and willfully makes any false, fictitious, or fraudulent representation may be liable to criminal prosecution under 18 U.S.C. Section 1001.

**Vendor Signature** \_\_\_\_\_ (must be signed by an authorized Executive Official)

**Name & Title :** \_\_\_\_\_

**Date:** \_\_\_\_\_

## ATTACHMENT D: AFFIRMATIVE ACTION COMPLIANCE

(a) **REQUIREMENTS OF PROGRAMS.** In accordance with Section 60-1.4 of Chapter 60 of Title 41 of the Code of Federal Regulations, as amended, the Seller shall develop and shall require each of its lower-tier subservice providers hereunder who has 50 or more employees and a subcontract of \$50,000 or more to develop a written affirmative action compliance program for each of its establishments. A necessary prerequisite to the development of a satisfactory affirmative action program is the identification and analysis of problem areas inherent in minority employment and an evaluation of opportunities of utilization of minority group personnel. The Seller's and each of its nonexempt lower-tier subservice provider's programs shall provide in detail for specific steps to guarantee equal employment opportunity keyed to the problems and needs of members of minority groups, including, when there are deficiencies, the development of specific goals and timetables for the prompt achievement of full and equal employment opportunity. The Seller and each of its nonexempt lower-tier subservice providers shall include in his affirmative action compliance program a table of job classifications. This table should include but not be limited to job titles, principal duties (and auxiliary duties if any), rates of pay, and where more than one rate of pay applies (because of length of time in job or other factors), the applicable rates. The affirmative action compliance program shall be signed by an executive official of the Seller or lower-tier subservice provider as the case may be.

(b) **UTILIZATION EVALUATION.** The evaluation of utilization of minority group personnel shall include the following:

- (1) An analysis of minority group representation in all job categories.
- (2) An analysis of hiring practices for the past year, including recruitment sources and testing, to determine whether equal employment opportunity is being afforded in all job categories.
- (3) An analysis of upgrading, transfer and promotion for the past year to determine whether equal employment opportunity is being afforded.

(c) **MAINTENANCE OF PROGRAMS.** Within 120 days from the commencement of the applicable purchase order of the lower-tier subcontract hereunder, the Seller and each nonexempt lower-tier subcontract hereunder shall maintain a copy of separate affirmative action compliance programs for each establishment, including evaluations of utilization of minority group personnel and the job classification tables, at each local office responsible for the personnel matters of such establishment. An affirmative action compliance program shall be part of the manpower and training plans for each new establishment and shall be developed and made available prior to the staffing of such establishment. A report of the results of such program shall be compiled annually and the program shall be updated at that time. This information shall be made available to representative of the agency or director upon request and the Seller's and each nonexempt lower-tier subservice provider's affirmative action program and the results it produces shall be evaluated as part of compliance review activities.

Vendor Signature \_\_\_\_\_ (must be signed by an authorized Executive Official)

Name & Title : \_\_\_\_\_

Date: \_\_\_\_\_

## **ATTACHMENT E – INSURANCE REQUIREMENTS**

### **INSURANCE REQUIREMENTS FOR SUPPLIERS**

Supplier shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Supplier, his agents, representatives, employees, or subsuppliers.

#### **A. MINIMUM SCOPE OF INSURANCE**

Coverage shall be at least as broad as:

1. Insurance Services Office form number GL 002 (Ed. 1/73) covering Comprehensive General Liability and Insurance Services Office form number GL 0404 covering Broad Form Comprehensive General Liability; or Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001). **“Claims Made” form is unacceptable. The “occurrence form” shall not have a “sunset clause”.**
2. Insurance Services Office form number CA 0001 (Ed. 1/78) covering Automobile Liability, code 1 “any auto” and endorsement CA 0025.
3. Workers’ Compensation Insurance as required by the Labor Code of the State of Louisiana, including Employers Liability insurance.

#### **B. MINIMUM LIMITS OF INSURANCE**

Supplier shall maintain limits no less than:

1. Commercial General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage (or higher limits depending on size of contract).
2. Automobile Liability: \$1,000,000 combined single limit per accident, for bodily injury and property damage.
3. Workers Compensation and Employers Liability: Worker’s Compensation limits as required by the Labor Code of the State of Louisiana and Statutory Employers Liability limits. Exception: Employers liability limit is to be \$1,000,000 when work is to be over water and involves maritime exposure.

#### **C. DEDUCTIBLES AND SELF-INSURED RETENTIONS**

Any deductibles or self-insured retention's must be declared to and approved by the University. At the option of the University, either: the insurer shall reduce or eliminate such deductibles or self-insured retention's as respects the University, its officers, officials, employees and volunteers; or the Supplier shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

#### **D. OTHER INSURANCE PROVISIONS**

The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverage
  - a. The University, its officers, officials, employees, Boards and Commissions and volunteers are to be added as “additional insured” as respects liability arising out of activities performed by or on behalf of the Supplier; products and completed operations of the Supplier, premises owned, occupied, or used by the Supplier. The coverage shall contain no special limitations on the scope of protection afforded to the University, its officers, officials, employees or volunteers. It is understood that the business auto policy under “Who is an Insured” automatically provides liability coverage in favor of the University.
  - b. The Supplier’s Insurance coverage shall be primary insurance as respects the University, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the University, its officers, officials, employees or volunteers shall be excess of the Supplier’s insurance and shall not contribute with it.
  - c. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the University, its officers, officials, employees, Boards and Commissions, or volunteers.
  - d. The Supplier’s insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer’s liability.
2. Worker’s Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the University, its officers, officials, employees and volunteers for losses arising from work performed by the Supplier for the University.
3. All Coverage's

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days’ prior written notice by certified mail, return receipt requested, has been given to the University.

#### **E. ACCEPTABILITY OF INSURERS**

Insurance is to be placed with insurers with an A.M. Best’s rating of no less than A-:VI. This requirement will be waived for workers’ compensation coverage only for those suppliers whose workers’ compensation coverage is placed with companies who participate in the State of Louisiana Workers’ Compensation Assigned Risk Pool.

#### **F. VERIFICATION OF COVERAGE**

Supplier shall furnish the University with certificates of insurance effecting coverage required. The certificate for each insurance policy is to be signed by a person authorized by that insurer to bind coverage on its behalf. The University reserves the right to require complete, certified copies of all required insurance policies, at any time.

## **ATTACHMENT F – Request For Supplier Diversity Certifications**

Louisiana State University is committed to fostering innovation and entrepreneurship through the use of diverse suppliers and the goal of the diversity initiative is to identify, align, strengthen and connect with diverse suppliers.

If your company holds a small business and or supplier diversity certification(s) please email them to me for inclusion in our supplier database. Examples are listed below.

### **AbilityOne: formerly Javits-Wagner-O'Day or JWOD**

Creates jobs and training opportunities for people who are blind or who have other severe disabilities. Javits-Wagner-O'Day Act of 1971, 41 U.S.C. 46-48c, the AbilityOne Program is a mandatory source of supply for Federal employees

### **Disadvantaged Business Enterprise: DBE**

The US Department of Transportation offers the certification for small socially and economically disadvantaged businesses.

### **Disabled Veteran Owned Small Business: DVOSB**

### **Emerging Business Enterprise: EBE**

### **Lesbian, Gay, Bisexual and Transgender-Owned Business: LGBTBE**

### **Minority-Owned Business Enterprise: MBE**

Certified by LA Minority Supplier Development Council; National Minority Supplier Development Council; other certification entities

### **Small Business Enterprise: SBE**

### **Small Disadvantaged business: SDB**

Certified by the Federal Small Business Association

### **Service- Connected Disabled Veteran-Owned Entrepreneurship: SDVB**

Certified by the Louisiana Economic Development office

### **Small & Emerging Business Development program: SEBD**

Certified by the Louisiana Economic Development office

### **Small Entrepreneurship/ Hudson Initiative: SE**

Certified by the Louisiana Economic Development office

### **Veteran Owned Small Business: VOSB**

### **Veteran Initiative/Veteran Owned Small Entrepreneurship : VSE**

Certified by the Louisiana Economic Development office

### **Woman-Owned Business Enterprise: WBE**

Certified by the Women's Business Enterprise National Council, Women's Business Enterprise Council South; other certification entities



## **LSU Health New Orleans (LSUHNO) A/V Standards**

This standard promulgates the A/V equipment brands that will be used on the LSU Health New Orleans campus when specifying and implementing Audio/Visual systems. Equipment brands rather than models are being specified in order to allow the flexibility to customize an A/V solution that best fits each project. For example, both the size and shape of a room will affect the model of projector, the screen size, audio requirements, and other attributes of the planned system.

### **1) Brand Standards:**

- a) Established using statewide contracts that were bid by the Office of State purchasing
- b) Driven by major A/V installations and multiple smaller installations in every major building on campus
- c) Assure that LSUHNO maximizes the consistency and interchangeability between installations
- d) Aid in providing the highest level of in-house expertise with a limited set of resources

### **2) “High-End” Installation:**

- a) A system within a room, hall or auditorium that incorporates an image processor allowing for more flexibility in displaying content.
- b) An auditorium or space that is used by multiple departments and seats a large number of people.
- c) Only certain brands are allowed in “high-end” installations
  - i) These brands may also be used in other applications, but must be used in “high-end” projects in favor of any other brands listed.

### **3) Projectors:**

- a) Installed Projectors:
  - i) Christie Digital projectors are specified for all installations.
- b) Portable Equipment:
  - i) Christie and NEC are specified.

### **4) Mounts:**

**5) Screens:**

a) Mounted Projection Screens:

- i) Fixed screens are preferred in any room where they are possible
- ii) If a fixed screen cannot be used (i.e. due to room size or configuration) motorized or manual pull-down screens may be used
- iii) The fabric will be high-contrast grey or white
- iv) Manufacturers:
  - (1) Draper and Da-lite for standard size screens
  - (2) Stewart Filmscreens for large, seamless custom sizes

b) Portable Projection Screens:

- i) Da-Lite and Draper are preferred if the size and aspect ratio needed are available

**6) Microphones:**

a) Shure, Sennheiser, and Behringer

b) USB microphones:

- i) Blue, Shure, Vaddio, HuddleCamHD, Anker

c) Analog Audio to USB Interfaces:

- i) Shure, Behringer, Vaddio

d) "High-end" installations:

- i) Wireless – Shure or Sennheiser
- ii) Wired - Shure

**7) Speakers:**

a) JBL, Behringer, Crestron, or Extron

b) Networked speakers: Shure or Q-Sys

c) "High-end" installations:

- i) JBL for standard, Shure or Q-Sys for networked speakers

**8) Audio Processors/Mixers:**

a) QSC, Crestron, Behringer, Shure, Kramer, and Extron

b) "High-end" installations:

- i) QSC, Crestron, Shure

**9) Audio Amplifiers:**

a) Crown, QSC, Lea, Behringer, Crestron, JBL, or Extron

b) "High-end" installations:

- i) Crown, QSC, Lea

**10) Document Cameras:**

- a) Hovercam (for USB), WolfVision, or AverMedia
- b) "High-end" installations:
  - i) Hovercam (for USB), WolfVision, AverMedia

**11) Flat Panel Monitors and Televisions, Touch and Non-Touch:**

- a) Sharp, Samsung, Christie, and LG
- b) All monitors and televisions must be professional or commercial grade:
  - i) This specification also applies to all touch screen, large format monitors, and televisions
  - ii) Professional or commercial grade monitors and televisions are required due to their robust construction and design which allows them to operate in a less-forgiving environment
  - iii) As a general rule, consumer monitors and televisions are not designed to be used in a public or commercial environment and their warranties are considered void if used in such a manner
- c) Monitors must have to ability to accept control from third party controllers via RS-232 or IP

**12) Direct LED Walls:**

- a) NanoLumens, Christie, or Samsung

**13) Image Processor:**

- a) Crestron

**14) Interactive Displays:**

- a) PC monitor based or flat panel based
  - i) Sharp, AVer, Dell, or Samsung
- b) Projection Interactive Whiteboard Systems:
  - i) SMART, Promethean, or Hitachi

**15) Control Systems:**

- a) Crestron

**16) Touch Panel Interfaces:**

- a) Crestron

**17) A/V over IP:**

- a) Crestron DM-NVX series

**18) Classroom Capture:**

- a) SonicFoundry Mediasite

**19) A/V Furniture:**

- a) Lecterns, credenzas, etc.
  - i) Spectrum Industries, Middle Atlantic, or Marshall Furniture
- b) “High-End” installations:
  - i) Marshall custom lecterns or Middle Atlantic

**20) Racks, Mounts and Carts:**

- a) Middle Atlantic or Chief:
  - i) This does not apply to lecterns and credenzas (see A/V Furniture above).
- b) Ceiling mounts for projectors:
  - i) Use the Chief Universal Locking Mount for projectors unless it is impossible in the room configuration. In such a case, every effort must be made to secure the projector.
- c) All wall mounted monitors will be mounted on pull out mounts
- d) A/V carts, including their mounts:
  - i) Chief, Middle Atlantic, or Spectrum Industries

**21) PTZ Video Cameras:**

- a) Vaddio, AVer, Marshall, and Sony
- b) “High-End” installations:
  - i) Vaddio and AVer

**22) DVD, DVD/VHS Combo Units, Blu-ray decks:**

- a) Sony or LG

**23) Videoconferencing Endpoints:**

- i) LSUHSC no longer uses hardware endpoints; only Webconferencing is used
- ii) LSUHSC’s current standards for Webconferencing are Zoom and Microsoft Teams, but all Webconferencing equipment must be compatible with Webconferencing software

**24) Power Conditioners/UPS Units:**

- a) Furman, APC, or Tripp-Lite

**25) Cables:**

- a) Any cables connected to any Crestron DM device must be certified by Crestron if such a cable exists; if Crestron does not certify a cable that must be connected to a Crestron device, the cable must be approved by LSUHNO.
- b) Cables for other purposes can be purchased from any manufacturer, although Crestron, Monoprice, Comprehensive, Extron, and Kramer are generally preferred

**26) Digital Signs:**

- a) LSUHNO uses FourWinds Interactive (FWi) for digital signs
- b) The hardware for these signs must be a professional display
  - i) Touch capability may be required and may be integrated into the monitor or effected by the use of an overlay
  - ii) The monitor must adhere to the guidelines for monitors listed in this document

**27) Accessories and Components:**

- a) If something is required that is not in the standards listed above, or if the manufacturer in the above standard does not produce a product with the specifications required for the project, the first vendors that should be used, in no particular order, are:
  - i) Crestron, Extron, Vaddio, JBL, Shure, Behringer, and Kramer.
  - ii) If these manufacturers do not produce the needed component, the selected component must be approved by the LSUHNO Enterprise A/V Group.

**LSU Health New Orleans (LSUHNO) A/V Installation Best Practices**

To provide consistent installation standards as well as ease of support, the following best practices will be used:

- All finishes/colors must be coordinated with and approved by LSUHNO.
- All installation must be performed following the manufacturer's specifications.
- To whatever degree possible or practical, signal conversion (e.g.: HDMI to VGA, analog to digital) is to be avoided since it introduces noise into the signal. Maintaining a signal's original format is to be done whenever possible. If signal conversion is required to achieve the system goals, it will be limited to as few conversions as required.
- All infrastructure must be as flexible as possible, allowing for future upgrades without the requirement of installing new infrastructure.
- LSUHSC prefers customizable touch panel interfaces over button panels in most cases due to the flexibility that they offer.
- Included in any bid must be a one-year warranty on equipment and installation and a one-year contract for service and support. Once the integrator reaches

substantial completion, the integrator must send a notice in writing to the LSUHNO Purchasing Department stating this and LSUHNO must accept this status. Acceptance will only come from the LSUHNO Purchasing Department in writing to the integrator. The one-year agreements must start from LSUHNO's acceptance of the project.

- Upon acceptance of the project, the vendor will turn over all information related to the project including but not limited to all as-built drawings, uncompiled Crestron code, programs, equipment user IDs and passwords, manuals, remotes, cases, software, warranty information, IP addresses, and spare hardware as well as keys and any special tools included for the equipment. Also, updated code and one line drawings must be provided as changes are made throughout the one-year support period. At the end of the warranty period, the integrator must ensure that current system programming and as-built drawings are delivered to LSUHNO.
- All cables which run through ceiling spaces **must** be **plenum** rated.
- All cables connected to Crestron DM devices must be Crestron certified.
- All cables must include a minimum of a 10% service loop.
- No permanent wire ties must be used; only releasable wire ties, clips, etc. or hook and loop straps are allowed within the lectern, credenza, or rack.

### **General:**

- All work shall adhere to the LSUHSC Structure Cabling System Design & Installation Standards.
- All network cable installation shall be coordinated with the LSUHSC Enterprise Networking.
- Unless otherwise specified, the bidder is expected to provide all plenum horizontal network cabling, all supplies, all modular jacks, all patch panels, and all patch cables required to build the complete structured cabling system.
- All penetrations used for cable routing shall be properly filled as to not jeopardize building fire suppression systems.

### **Network Closet:**

- Plenum Belden Network cables from the room(s) shall terminate using Panduit modular jacks (Part # CJ688TPVL). AV equipment type, locations, and network requirements will determine the number of cables that must be installed.
- Network cable installation shall be in accordance with the manufacturer's installation instructions and best practices as to not void manufacturer cable warranty.
- Network cables shall not have a service loop installed.
- Panduit modular jacks shall be terminated using the 568A wiring standard.
- All network cables shall be tested using a cable tester calibrated to "certify that the cable" will "Pass" industry standards for Category 6. Marginal test results will not be accepted.
- A copy of all test results must be submitted in electronic format to LSUHSC Enterprise Networking.
- Panduit modular jacks shall be inserted into Panduit 48-port modular patch panels (Part# CPPLA48WBLY).
- Patch panels shall have machine printed labels. Labeling scheme shall be approved by LSUHSC Enterprise Networking.
- Panduit TX6 Plus Patch Cords (Part # UTPSP5VLY) shall be supplied for each patch panel termination.
- Appropriate-length, yellow-colored Panduit TX6 Plus Patch Cords shall be supplied for each AV component (housed in the AVTR) that requires network connectivity.

### **Ceiling Area:**

- Caddy (Part# CAT32) 2" J-hooks with cable retention clips shall be installed to support cables.

- In areas where large numbers of cables must be supported, larger size J-hooks will be required so that manufacturer maximum fill ratios are not exceeded.

**Project Room(s):**

- Cables within the room(s) shall be routed using existing/established pathways.
- Network cables in the room(s) shall be terminated using Panduit Cat 6 RJ-45 jacks.
- Cables must be labeled using a Labeling scheme shall be approved by LSUHSC Enterprise Networking.





Health Sciences Center

**LSUHSC Computer Services**  
**433 Bolivar Street**  
**New Orleans, LA 70112**  
**Phone 504-568-6130**

# **LSUHSC Enterprise Networking**

## **Structured Cabling System: Design & Installation Standards**

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## Article I. Revision History

<u>Date</u>	<u>Area of Change</u>	<u>Scope of Change</u>
1/21/2011	Document	Modified document verbiage to specify strict compliance with all LSUHSC requirements.
1/21/2011	Document	Reorganized document to cover all facets of wiring build-outs.
1/21/2011	Article III, Section 3.04	Added "Contractor/Installer Requirements" section to document.
1/21/2011	Article III, Section 3.05	Added "Coordination of Work" section to document.
1/21/2011	Article IV	Revised list of applicable industry standards
1/21/2011	Article V	Added "Preferred Part Number" section to document.
1/21/2011	Article VI	Added "Before you Dig" section to document.
1/21/2011	Article VII	Added "Building Entrance Facilities" section to document.
1/21/2011	Article VIII, Section 8.06	Added "Access Controls" section to document.
1/21/2011	Article VIII, Section 8.07	Added stipulation for no 1 <sup>st</sup> Floor HCs in multi-story buildings due to flooding concerns.
1/21/2011	Article VIII, Section 8.17	Added "Electrical Emergency Disconnect" section to document.
1/21/2011	Article VIII, Section 8.19	Added labeling requirements for conduits and innerduct.
1/21/2011	Article VIII, Section 8.19	Added caveats to prevent electrolysis.
1/21/2011	Article IX, Section 9.02	Removed 6" wide vertical cable management at end of racks.
		Increased vertical cable management between racks to 10" wide.
		Specified that all racks must be grounded.
1/21/2011	Article X, Section 10.04	Added "Special Use Patch Panels" section to document.
1/21/2011	Article X, Section 10.05	Modified layout of data patch panels in racks to better utilize vertical management.
1/21/2011	Article X, Section 10.06	Modified layout of voice patch panels in racks to better utilize vertical management.
1/21/2011	Article X, Section 10.07	Modified layout of telephony patch panels in racks to better utilize vertical management.
1/21/2011	Article XI, Section 11.01	Added installation caveat regarding building infrastructure shall not be used to support horizontal cabling.
1/21/2011	Article XI, Section 11.02	Specified that cable trays must be grounded.
1/21/2011	Article XII, Section 12.02	Added "Splice Points" section to document.
1/21/2011	Article XII, Section 12.03	Added "Service Loops" section to document.
1/21/2011	Article XII, Section 12.05	Specified that intra-building fiber must use 50 micron laser optimized fiber (OM4)
1/21/2011	Article XII, Section 12.07	Added labeling requirements for fiber optics.
1/21/2011	Article XII, Section 12.08	Specified that fiber optic terminations must use fusion splices.
1/21/2011	Article XIII, Section 13.02	Updated data/voice cable colors. Data is blue, Voice is Ivory.

1/21/2011	Article XIII, Section 13.02	Added special purpose cable colors. Purple is networking. Orange is building systems.
1/21/2011	Article XIII, Section 13.05	Added labeling requirements for special purpose cabling.
1/21/2011	Article XIII, Section 13.08	Added "Special Purpose Drops" section to document.
1/25/2011	Article 1	Added "Revision History" section to document.
1/26/2011	Article XII, Section 12.01	Added caveat about pulling tension and bend radius.
1/26/2011	Article XIII, Section 13.01	Added caveat about pulling tension and bend radius.
1/31/2011	Article X, Section 10.02	Added caveat regarding patch panel placement in racks.
2/23/2011	Article III, Section 3.06	Added "Removal of Abandoned Cables" section to document
2/23/2011	Article XIII, Section 13.02	Added requirement for spacing between electrical and data outlets.
4/6/2011	Document	Rewrite to comply with R.S 38:2290
7/16/2012	Article XIII, Section 12.06	Added requirement for contractor to provide "special purpose" patch cables in cross-connect.
7/1/2016	Article III, Section 3.06	Added verbiage that contractor shall check with Network/Facilities prior to removal of abandoned cables.
8/9/2016	Article XII, Section 12.10	Added verbiage about marginal passing test results.
5/30/2017	Document	Revised document due to change in definition of a "Standard Drop"
8/7/2019	Article XII, Section 12.06	Added "Green" for Passive Poe Systems
12/11/20	Article XII, Section 12.02	Added caveat regarding cable splicing.

## Article II. **Definitions, Acronyms and Units of Measure**

### **Section 2.01 Definitions**

Abandoned Cable: As defined in paragraph 800.2 of the National Electric Code, any communication cable that is not terminated on both ends at a connector or other equipment and not identified for "For Future Use" with a tag.

Backbone: A facility (e.g., pathway, cable or conductors) between telecommunications rooms, or floor distribution terminals, the entrance facilities and the equipment rooms within or between buildings.

Cable Run: A length of installed media which may include other components along its path.

Drop: An outlet that is capable of supporting data, voice, or video applications.

Faceplate: The covering for a cable outlet usually flush mounted into a wall or a termination box mounted to the surface of a wall or floor. Faceplates typically have openings or insert positions for modular jacks.

Horizontal Cabling: The cabling between and including the telecommunications outlet/connector and the horizontal cross-connect.

Horizontal Cross-connect (HC): A cross-connect of horizontal cabling to other cabling, e.g., horizontal, backbone, equipment.

Main Cross-Connect (MC): A cross-connect for first level backbone cables, entrance cables and equipment cables.

Modular Jack: An 8 position 8 conductor (8P8C) connector commonly used to terminate twisted pair cabling. An 8P8C modular connector has two paired components: the male plug and the female jack.

Pathway: A facility for the placement of telecommunications cable.

Standard Drop: A drop in a work area consisting of two color-coded ports and two color-coded wires. Generally, one drop is used to support VoIP phone and workstation and one drop is available for spare.

Structured Cabling System: A complete system of cabling and associated hardware, which provides a comprehensive telecommunications infrastructure. Installations typically include entrance facilities, equipment rooms, backbone cabling, telecommunication rooms, horizontal cabling, and work areas.

Work Area: A building space where the occupants typically interact with computer equipment.

## Section 2.02 Acronyms

AC	Alternating Current
ANSI	American National Standards Institute
BICSI	Building Industry Consulting Service International
EMI	Electromagnetic interference
HC	Horizontal Cross-Connect
HVAC	Heating, Ventilation and Air Conditioning
ISO/IEC	International Organization for Standards/ International Electrotechnical Commission
ITU	International Telecommunications Union
MC	Main Cross-Connect
NEXT	Near-end Crosstalk
NFPA	National Fire Protection Association
OS1	Optical Single-mode 1
OSI	Open Systems Interconnection
OTDR	Optical Time Domain Reflectometer
PVC	Polyvinyl Chloride
RCDD	Registered Communications Distribution Designers
SC	Subscriber Connector
TGB	Telecommunications Grounding Busbar
TIA/EIA	Telecommunications Industry Association / Electronic Industries Association
UTP	Unshielded Twisted Pair

## Section 2.03 Units of Measure

μm	Micrometer or micron
A	Ampere
dB	Decibel
ft	Foot, abbreviated ‘
in	Inch, abbreviated ”
kPa	KiloPascal
lx	Lux
V	Volt



## **Article III. Design and Installation Standards Overview**

### **Section 3.01 Purpose**

This document is intended to provide a basic framework for the design specifications and requirements for all Structured Cabling System Installations.

All campus renovations projects to existing work areas and new building construction shall include drawings for each Structured Cabling System sub-system (if applicable).

This document details the minimum performance criteria for all components which comprise a Structured Cabling System, including product specifications, design considerations and installation guidelines.

### **Section 3.02 Caveats**

An authorized representative of LSU Health Sciences Center (LSUHSC) Executive Management must approve all deviations from these standards in writing prior to implementation of the deviation.

All Structured Cabling System installations must be coordinated through LSUHSC Enterprise Networking.

All construction projects must be approved by and coordinated through LSUHSC Facility Services.

The contractor is responsible for ensuring that all products selected are mated to interoperate such that the overall performance capability and usefulness of the Structured Cabling System is not degraded.

### **Section 3.03 Scope**

This document applies to all LSUHSC facilities including all new construction and renovations to existing facilities or work areas.

These standards shall apply to all work performed by LSUHSC staff, contractors, sub-contractors and technicians.

### **Section 3.04 Contractor/Installer Requirements**

This document is subject to revisions and modifications as necessary to maintain support and compatibility with changing construction techniques and technological developments.

The contractor/installer shall:

- Verify compliance with the most recent revision of this document and all applicable standards.
- Adhere to all applicable Building, Fire, and/or Life Safety Codes, State Laws and Industry Standards.
- Furnish all labor, supervision, tooling, miscellaneous mounting hardware and consumables for each cabling system installed.
- Remove all trash and debris on a daily basis.
- Submit any and all documentation that is necessary for a manufacturer provided warranty

and/or a contractor/installer provided warranty. The warranty terms and conditions and coverage period shall be clearly stated.

### **Section 3.05 Coordination of Work**

Serving as both an Academic Medical Center and a Healthcare Provider, it is often necessary that installations must be scheduled around daily business activities, such as classes and/or clinics.

Therefore, the contractor is to coordinate with the LSUHSC Enterprise Networking representative so that all necessary work will be accomplished in an orderly and timely manner with a minimal amount of disruption.

## **Article IV. Applicable Standards**

### **Section 4.01 Caveats**

In general, the following standards are to be used as minimum standards.

Compliance with the most current revision and all addenda to each of the applicable standard listed below is required.

In the event of ambiguities regarding requirements, the more stringent standard shall be adhered to. LSUHSC Enterprise Networking will determine the more stringent standard.

### **Section 4.02 State of Louisiana Standards**

State of Louisiana, Division of Administration: Facility, Planning & Control, Guideline Requirements, Specifications and Wiring Diagrams for Communications Cable/Wire and Related Building Facilities

### **Section 4.03 BICSI Standards**

Telecommunications Distribution Methods Manual, 12th edition

### **Section 4.04 ISO Standards**

ISO 9001: Quality Management Systems - Requirements

### **Section 4.05 ITU Standards**

ITU-T G.652.D: Characteristics of a single-mode optical fibre cable

ITU-T G.651: Characteristics of a 50/125 mm multimode graded index optical fibre cable

### **Section 4.06 NFPA Standards**

NFPA 70: National Electric Code

NFPA 75: Standard for the Protection of Information Technology Equipment

NFPA 101: Life Safety Code

### **Section 4.07 TIA/EIA Standards**

TIA/EIA-526-7: OFSTP-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant

TIA/EIA-526-14: Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant

TIA/EIA-568-C.1: Commercial Building Telecommunications Cabling Standard

TIA/EIA-568-C.2: Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components

TIA/EIA-568-C.3: Optical Fiber Cabling Components Standard

TIA/EIA-569-B: Commercial Building Standard for Telecommunications Pathways

TIA/EIA-598-C: Optical Fiber Cable Color Coding

TIA/EIA-606-A: Administration Standard for the Telecommunications Infrastructure of Commercial Buildings

ANSI-J-STD-607-A: Commercial Building Grounding and Bonding Requirements for Telecommunications

TIA/EIA-758-A: Customer-Owned Outside Plant Telecommunications Cabling Standard

TIA/EIA-942: Telecommunication Infrastructure Standard for Data Centers

TIA/EIA-1179: Healthcare Facility Telecommunications Infrastructure Standard

## **Article V. Underground Excavation**

All underground excavations shall adhere to Louisiana Revised Statute (RS) 40:1749.11 regarding identification and prevention of damage to existing underground utilities and services.

The Contractor shall be responsible for contacting LA One Call so that utility providers in the area are properly notified and have adequate time to identify services.

All damages caused by the Contractor shall be repaired at Contractor's expense.

## **Article VI. Building Entrance Facilities**

Every building should be constructed to allow for diverse entrance paths for Telecommunication providers and/or inter-building fiber optic connectivity.

Telecommunication provider paths shall consist of a minimum of two 4" rigid metallic conduit pathways, fully populated with innerducts and pull-strings, from a hand-hole located on the property line into the building telecommunications room.

Hand-holes shall be a minimum of 24" wide x 36" length x 24" deep.

All non-rated copper or optical cables (i.e. outdoor cable plant) must transition to indoor rated cables within 50' of building entrance unless they are encapsulated in EMT or rigid conduit.

Pull strings shall be 1/4" 500 lb strength pull rope.

No section of conduit shall be longer than 100' or contain more than two 90° bends between pull points or pull boxes.

The Telecommunications room must have 4' x 8' x 3/4" fire-rated plywood installed on the wall near the 4" conduit penetrations.

A Telecommunications Grounding Busbar (TGB) with #6 AWG ground wire to the main power ground for the building must be installed.

The actual point of entrance for all cable paths into buildings must be approved by LSUHSC Facility Services.

## **Article VII. Cross-Connect Design**

### **Section 7.01 General**

The Cross-Connect is the room where the horizontal and/or backbone cabling is terminated and network electronics are installed. Depending on function, a cross-connect may serve as a main cross-connect (MC), a horizontal cross-connect (HC) or as both.

TIA/EIA-569-B: Commercial Building Standard for Telecommunications Pathways and Spaces provides a standard for the design and construction of the cross-connect.

### **Section 7.02 Caveats**

All applicable local, state and federal codes shall be observed for the design of the cross-connect.

The cross-connect shall be dedicated to the telecommunications function and related support facilities. The cross-connect shall not be shared with electrical installations other than those for telecommunications. Equipment not related to the support of the cross-connect (e.g., piping, ductwork, pneumatic tubing, etc.) shall not be installed in, pass through, or enter the cross-connect.

### **Section 7.03 Asbestos Safety**

A review of the current location, extent and condition of asbestos will be required. The construction of the cross-connect shall be such that the safety of the occupants of the building is not jeopardized before, during, or after construction.

If asbestos is determined to exist within the open areas of the cross-connect, sufficient notification shall be prominently displayed so that all people entering the room are informed of the risks of doing so.

### **Section 7.04 Fire Protection**

Fire protection of the cross-connect shall be provided as per applicable code. All sprinkler heads shall be provided with wire cages to prevent accidental operation.

### **Section 7.05 Entry Door**

The entry door shall be a minimum of 36" wide and 80" high, without a doorsill and fitted with a lock.

Code permitting, doors shall swing outward. Otherwise, inward door swing will be determined by the door placement such that the swing of the door opens into the nearest wall.

### **Section 7.06 Access Controls**

Access to each cross-connect shall be tightly controlled and each room shall at a minimum be secured with a high security lock.

If additional security is deemed necessary by LSUHSC Executive Management, then the installation of HID Proximity Readers, Electronic Door Strikes and Request-To-Exit PIR Motion Sensors or similar components will be required.

### **Section 7.07 Location**

The cross-connect shall be located in an accessible area on each floor and shall be located as close as possible to the center of the building or the area being serviced.

The cross-connects within multi-story buildings should be vertically stacked.

The cross-connect shall not be located adjacent to any electrical, mechanical, or other areas that are likely to emit Electromagnetic Interference (EMI).

In multi-story buildings, if possible, there should not be a cross-connect located on the 1<sup>st</sup> floor to limit exposure from flooding.

### **Section 7.08 Sizing**

TIA/EIA-568-C.1: Commercial Building Telecommunications Cabling Standard Part 1: General Requirements provides a standard for the sizing of cross-connects in commercial buildings.

TIA/EIA-1179: Healthcare Facility Telecommunications Infrastructure Standard provides a standard for the sizing of cross-connects in Healthcare Facilities.

Cross-connect sizing is generally based on the square footage of the area being serviced. Additional requirements such as density of drops in the service area or additional equipment that must be located in the cross-connect may however require additional space.

Refer to table 1 below for the TIA/EIA minimum cross-connect size requirements.

Serving Area	Minimum Cross-Connect Size
Ft <sup>2</sup>	Ft x Ft
10000	10 x 11
8000	10 x 9
5000	10 x 7
For support of additional services such as AV or Building MC services	10 x 16 or larger
Healthcare	10 x 13 or larger

**Table 1: TIA/EIA Minimum Cross-Connect Sizing**

If the floor size to be serviced exceeds 10,000 ft<sup>2</sup> or if distances between the cross-connect and work area exceeds 295', additional cross-connects will be required.

For floor areas smaller than 5000 ft<sup>2</sup>, Annex B Section B.3 of TIA/EIA-569-A provides suggestions for smaller cross-connects which may be considered.

#### **Section 7.09 Ceiling**

For maximum flexibility, a false ceiling shall not be installed. The structural ceiling shall be painted white.

#### **Section 7.10 Walls**

A minimum of three walls shall be covered with rigidly fixed ¾" A-C plywood, preferably void free, 8' high, capable of supporting attached equipment.

Plywood shall be either fire-rated and/or covered with two coats of fire retardant paint and shall be installed in a horizontal orientation beginning 48" from the floor.

All walls shall be painted white to enhance room lighting.



### **Section 7.11 Flooring**

Flooring shall consist of vinyl composition tile, off-white in color.

### **Section 7.12 Lighting**

Fluorescent Lighting shall be a minimum of 500 lx (50 foot candles) mounted a minimum of 8.5' above finished floor.

Lighting fixtures should not be powered from the same electrical distribution panel as the network electronics installed in the cross-connect.

Dimmer switches shall not be used.

To prevent EMI, lighting fixtures shall be kept a minimum of 18" away from cable pathways.

Emergency lighting and signs shall be properly placed such that an absence of light will not hamper emergency exit.

### **Section 7.13 Floor Loading**

The cross-connect shall be located on floor areas designed with a minimum floor loading of 2.4 kPa (50 lbf/ft<sup>2</sup>).

Contractor shall verify that concentrations of proposed equipment do not exceed the floor loading limit.

If unusually heavy equipment is anticipated, these specifications may have to be increased.

### **Section 7.14 Penetrations**

All penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with National Fire Protection Association and State Fire Marshal requirements.

There shall be a minimum of four 4" slab penetrations per cross-connect in order to reach cross-connects on lower floors. In buildings without a cross-connect on the 1<sup>st</sup> floor, additional penetrations may be required in the 2<sup>nd</sup> floor cross-connect to accommodate drops from the 1<sup>st</sup> floor.

All penetrations shall be placed such that

- Where a slot is used, it shall have a minimum 1" curb around the top of the slot.
- Where a sleeve is used, it shall extend 1" - 3" above the floor.

All penetrations must be free of sharp edges so that cables will not be damaged.

Horizontal penetrations shall be sufficient to allow access to the main horizontal distribution pathway.

### **Section 7.15 HVAC**

Planning for continuous HVAC (24 hours per day and 365 days per year) shall be included in the initial design.

HVAC shall be designed to maintain the cross-connects temperature the same as the adjacent office area. Ambient room temperature should be between 68° – 72° F.

A positive pressure shall be maintained with a minimum of one air change per hour, or as required by applicable code. When active devices (heat producing equipment) are present, a sufficient number of air changes should be provided to dissipate the heat. LSUHSC Enterprise Networking will provide the necessary heat dissipation information for all electronics that will be installed in the cross-connect to determine cooling requirements.

If a standby power source is available in the building, the HVAC system serving the cross-connect should be connected to the standby supply.

### **Section 7.16 Electrical**

As electrical requirements vary by installation, LSUHSC Enterprise Networking will provide the electrical circuit requirements including voltage, receptacle types and locations within each cross-connect prior to construction.

If standby power will be available, automatic switchover of power should be provided. Outlet faceplates to designate emergency power shall be red in color.

Outlet faceplates to designate building power shall be gray in color.

### **Section 7.17 Electrical Emergency Disconnect**

Each cross-connect shall have a properly sized non-fusible safety switch disconnect installed, configured such that all outlets within the room are isolated when switched off.

The electrical emergency disconnect shall be mounted on the wall immediately inside of the door such that it is reachable without entering the cross-connect.

### **Section 7.18 Grounding**

As per TIA/EIA-607: Commercial Building Grounding and Bonding Requirements for Telecommunications, each cross-connect shall contain a TGB.

The TGB shall be located inside the cross-connect and be insulated from its support; a 2" separation is recommended.

The TGB shall be located so as to provide the greatest flexibility and accessibility for telecommunications system grounding.

Multiple TGBs may be installed within the same closet to aid in minimizing bonding conductor lengths and terminating space.

## **Article VIII. Cross-Connect Build-out**

### **Section 8.01 General**

The specifications detailed in the following section are the general design requirements for each cross-connect.

Refer to figures 1 through 5 for an overhead, front, and side view showing an example of a typical MC or HC build-out.

### **Section 8.02 Caveats**

Typical designs may need to be modified due to the room orientation, room dimensions, cable entrances facilities, drop density and/or voice and video requirements. LSUHSC Enterprise Networking will provide a to-scale drawing for each cross-connect.

### **Section 8.03 Racks**

Racks shall be 7' in height and shall support 19" rack-mount widths.

Rack Units (RU) should be clearly marked on the racks.

A minimum of three racks shall be installed in each HC.

A minimum of four racks shall be installed in the MC.

Racks shall be installed and secured as per the manufacturer's installation instructions.

Racks shall be positioned within the cross-connect to allow access to both the front and rear of all racks. When planning access to the rear of the racks, consideration should be made for the fact that equipment mounted in the rack will often extend at least 24 –30" behind the rack. As such, adequate allowance shall be made to the rear of the rack to allow for access behind the racks even after equipment is permanently installed.

All racks shall be properly grounded.

### **Section 8.04 Vertical Cable Management**

Vertical Managements shall be a minimum of 10" wide.

Vertical Managements shall be double-sided to allow routing of cables front and rear. Both front and rear vertical managements shall have hinged doors to hide cables.

A vertical management shall be installed between each rack in the cross-connect.

All vertical managements shall be installed and secured as per the manufacturer's installation instructions.

### **Section 8.05 Cable Runway Installation**

Cable runway shall be a minimum of 18" wide and black in color.

All Cable runways shall be installed and secured as per the manufacturer's installation instructions.

All Cable runways crossing above racks shall be secured to and supported above each rack using a Cable Runway Standoff Support.

All cable runways shall be properly grounded.

### **Section 8.06 Cable Runway Drops**

Cable Runway drops shall be installed to accommodate the cable bend radius in order to transition cable routing from horizontal cable runways and into each of the vertical cable managements.

Cable Runway drops shall be mated for 18" cable runway.

All Cable runway drops shall be installed and secured as per the manufacturer's installation instructions.

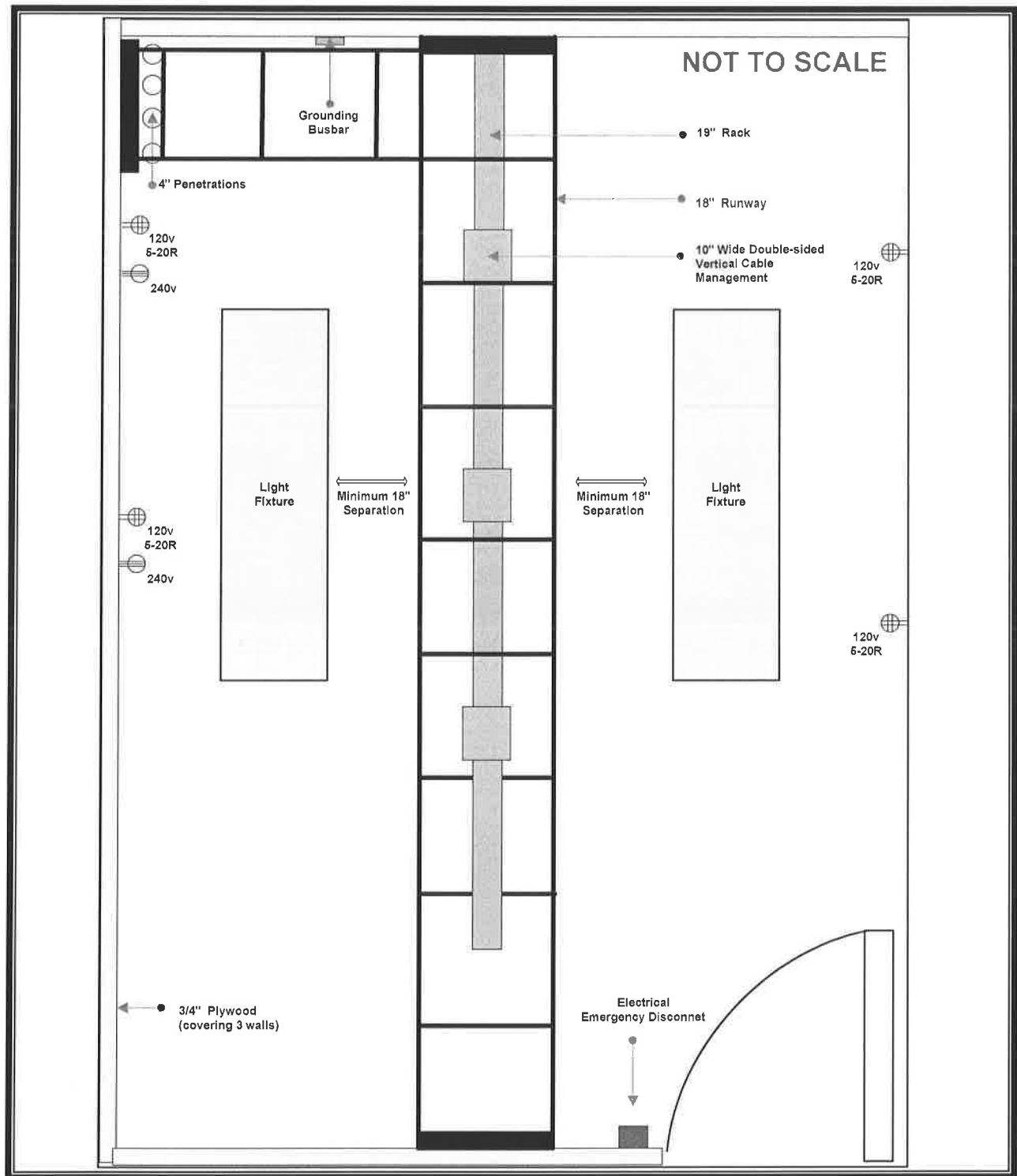


Figure 1: Main Cross-Connect Overhead View

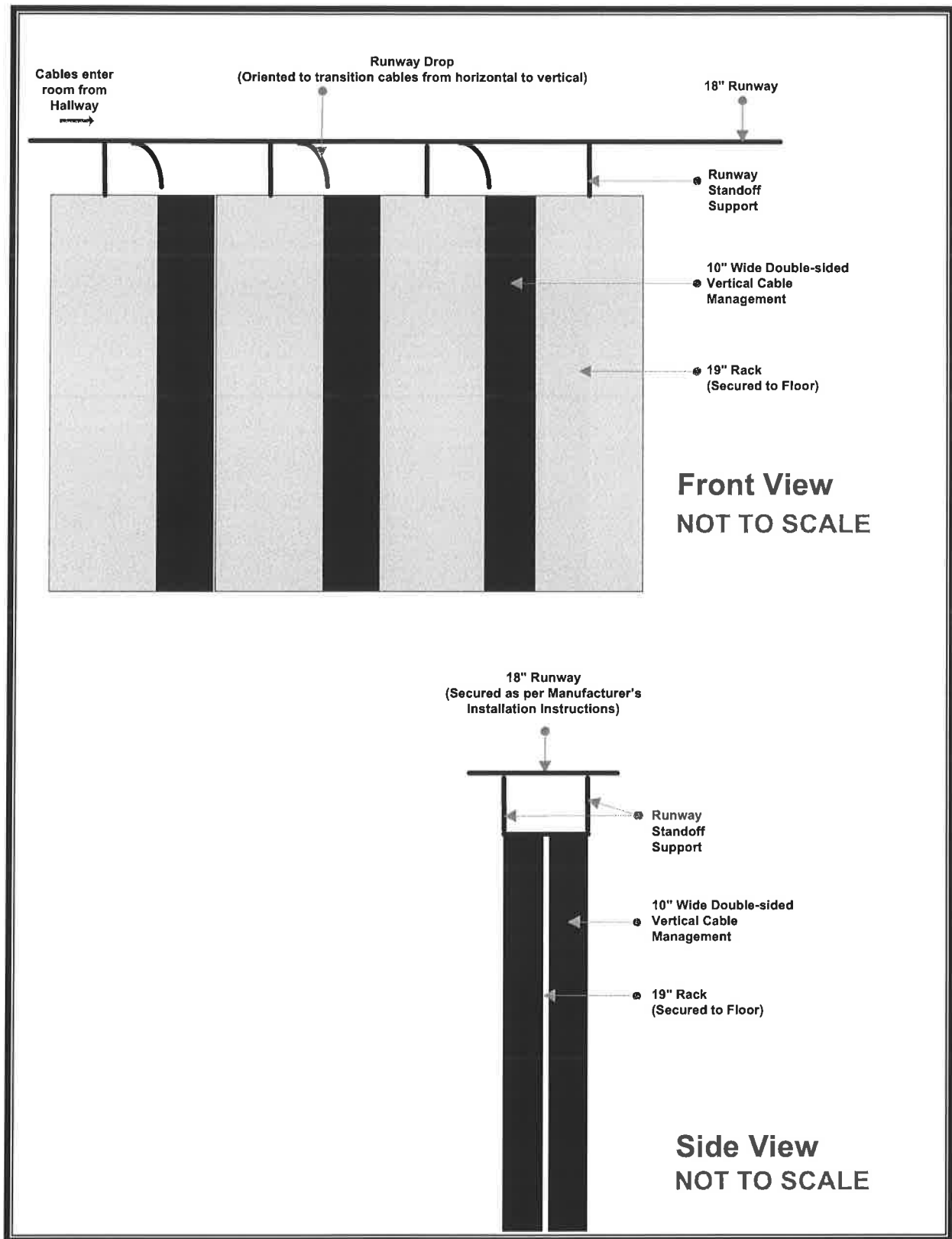
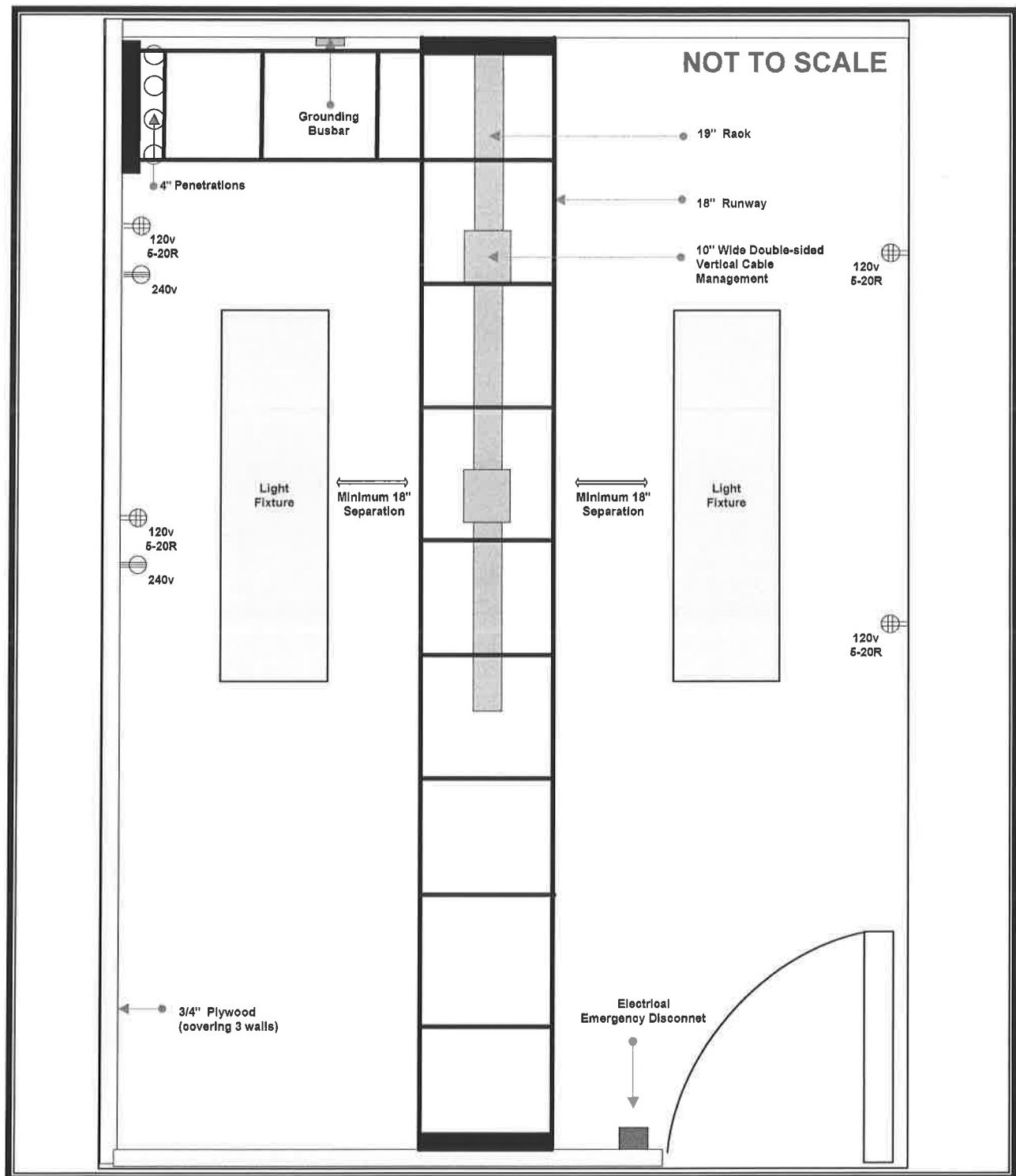
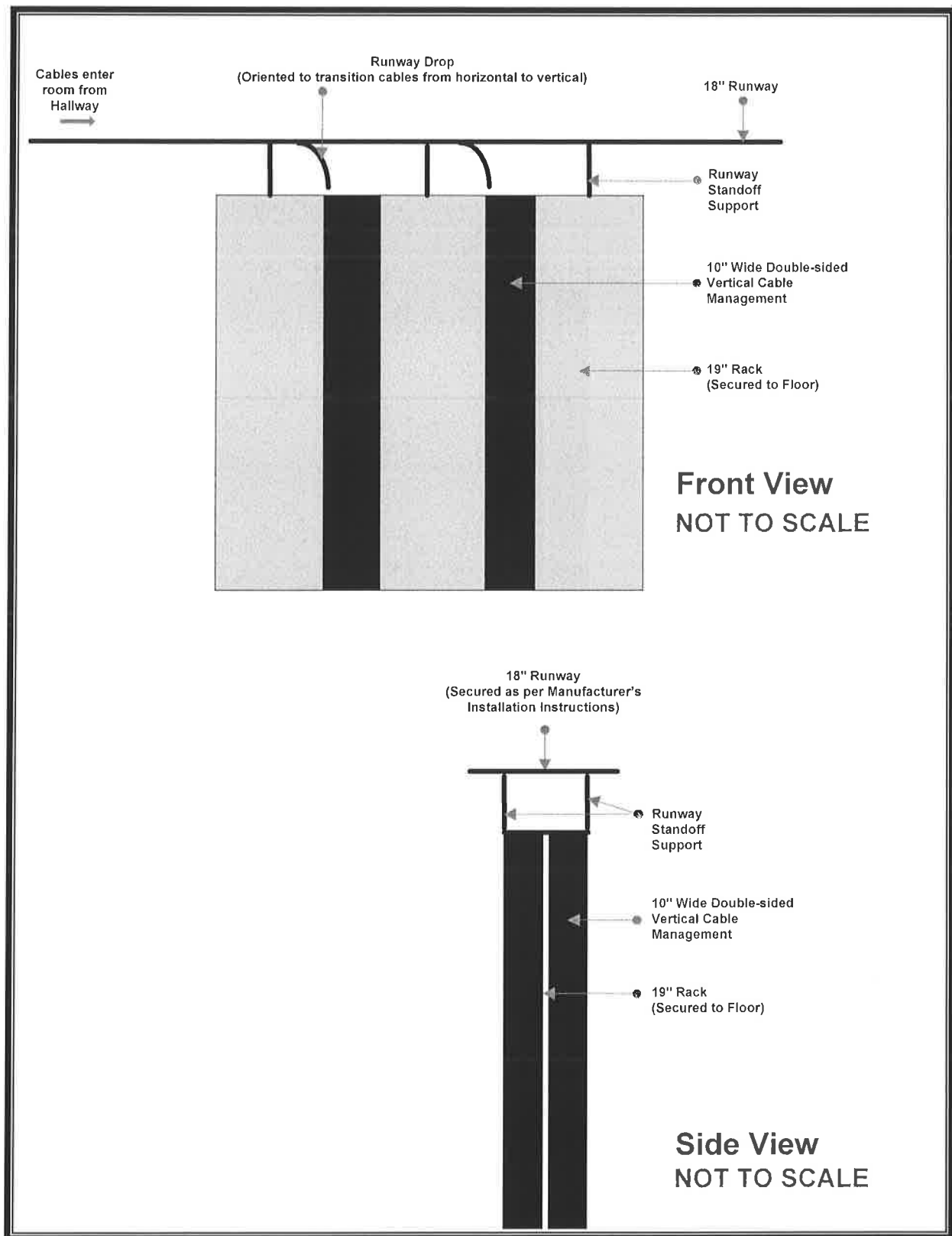


Figure 2: Main Cross-Connect Front and Side View

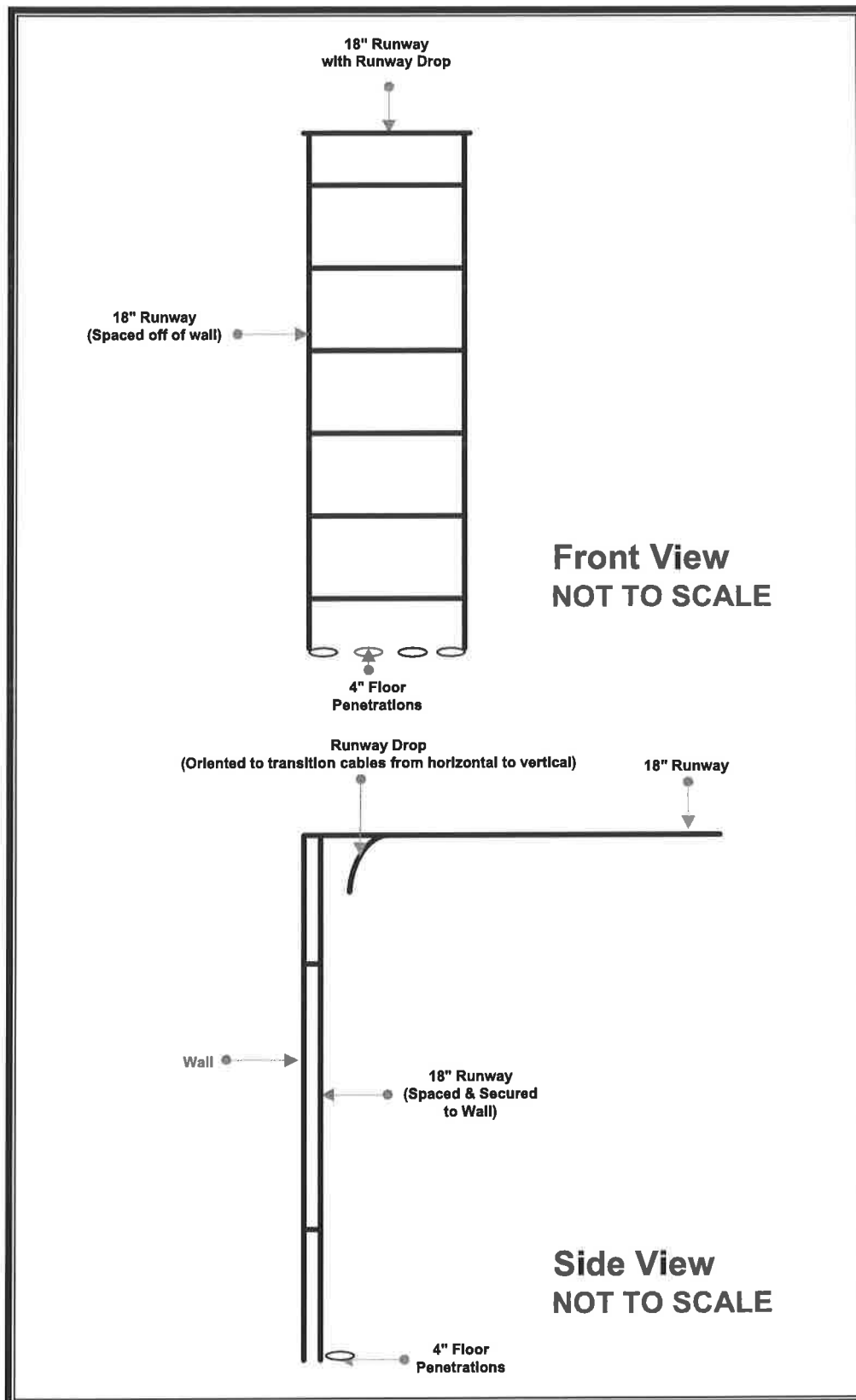


**Figure 3: Horizontal Cross-Connect Overhead View**



**Figure 4: Horizontal Cross-Connect Front and Side View Rack Layout**





**Figure 5: Vertical Cable Management**

## **Article IX. Rack Layout**

### **Section 9.01 General**

Each HC build-out consists of a three rack system.

When facing the front of the racks,

- The left most rack is designated as Data Rack 1.
- The middle rack is designated as the Network Rack.
- The right most rack is designated as Data Rack 2.

In addition to the HC racks, the MC shall have an additional rack positioned left of the HC racks that will be designated as the Core Network Rack.

Refer to the figure 6 for a typical MC rack layout and to figure 7 for a typical HC rack layout.

### **Section 9.02 Caveats**

Typical rack layouts may need to be modified due to the drop types and density. LSUHSC Enterprise Networking will provide the necessary guidance to installers for the rack layout.

### **Section 9.03 Fiber Optic Enclosures**

All fiber optic enclosures shall be 19" rack mountable and shall accommodate fiber optic termination capacity for a minimum of 24 strands of fiber optics.

Fiber optic enclosures shall be black in color.

In the HC, install a fiber optic enclosure for the intra-building fiber optics at the top of the Core Network Rack.

In the MC, install fiber optic enclosures for inter-building and intra-building fiber optics beginning at the top of the Core Network Rack. Inter-building fiber optics shall be housed in a separate enclosure from Intra-building fiber optics.

If multiple fiber optic enclosures are utilized in the MC for intra-building fiber, fiber optic enclosures should be arranged such that room numbers appear in a descending order from top to bottom.

All fiber optic enclosures shall be labeled with a machine etched hard plastic label.

Labels for fiber optic enclosures supporting intra-building fiber shall specify at a minimum the remote room number where the fiber optics terminates.

Labels for fiber optic enclosures supporting inter-building fiber shall specify at a minimum the remote building name and room number where the fiber optics terminate.

#### **Section 9.04 Patch Panels**

Patch panels shall be 19" rack mountable.

Patch panels shall have a 24 or 48-port capacity and support modular jacks. Jacks shall be populated in a left to right fashion.

In high density environments, angled patch panels shall be utilized.

When possible, cables should be installed in the patch panels in sequence number order to simplify locating specific ports.

Patch panels shall have machine printed labels with plastic label covers. Labeling shall be identical to the respective faceplate in the work area.

#### **Section 9.05 Patch Panel Usage**

LSUHSC Enterprise Networking will specify the organization of the modular jacks across the various patch panels listed below:

##### **(a) Data Patch Panels**

Data Patch Panels shall be positioned beginning in the upper portion of Data Rack 1 and 2.

Drops shall be split equally between Data Rack 1 and 2.

##### **(b) Special Use Patch Panels**

In the Network Rack, below the network electronics, a minimum of two 48-port patch panels shall be installed.

One patch panel will support modular jack terminations for special Network Systems, such as Access Points and Digital Signage while the second patch panel will support terminations for Building & Security systems, such as HVAC Monitoring, Access Control Systems, IP Video Cameras, etc.

##### **(c) Telephony Cross-Connect Patch Panels**

A minimum of one 48-port patch panels to support the Analog telephone infrastructure will be installed in the Network Rack below the special use patch panels.

Details for cross-connect instructions to connect to the telephone infrastructure is outside the scope of this document. Consult the Telephony Standards for details on the installation and labeling requirements.

#### **Section 9.06 Horizontal Cable Managements**

Horizontal Cable Managements shall be 19" rack mountable.

Horizontal Cable Managements for the purpose of managing patch cable shall have hinged covers where managements for horizontal cable will require D rings.

Horizontal Cable Managements shall be properly sized for the number of cables to be managed.

Horizontal Cable Managements shall be installed between all flat patch panels.

Horizontal Cable Management is not required if utilizing angled patch panels.

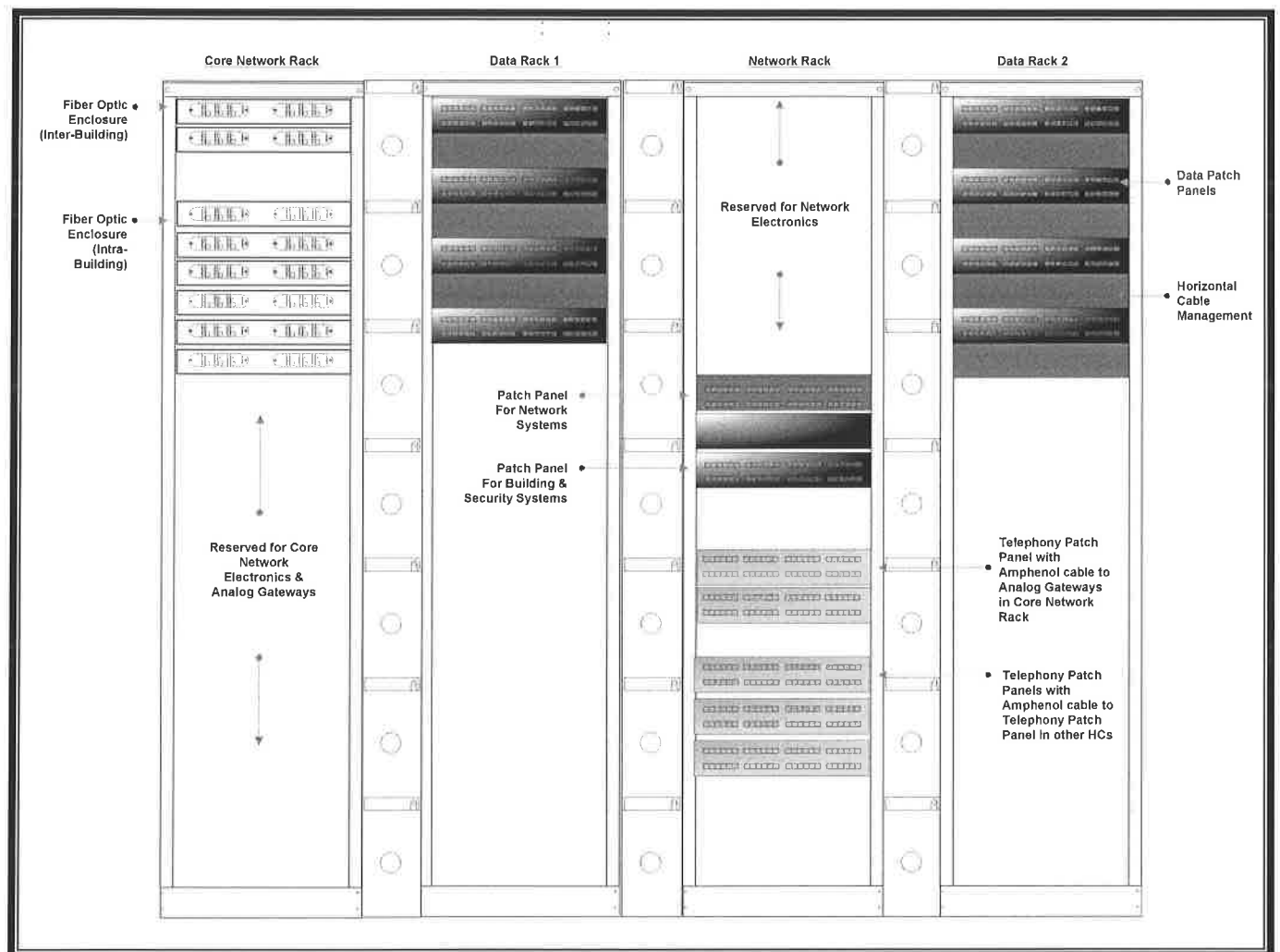
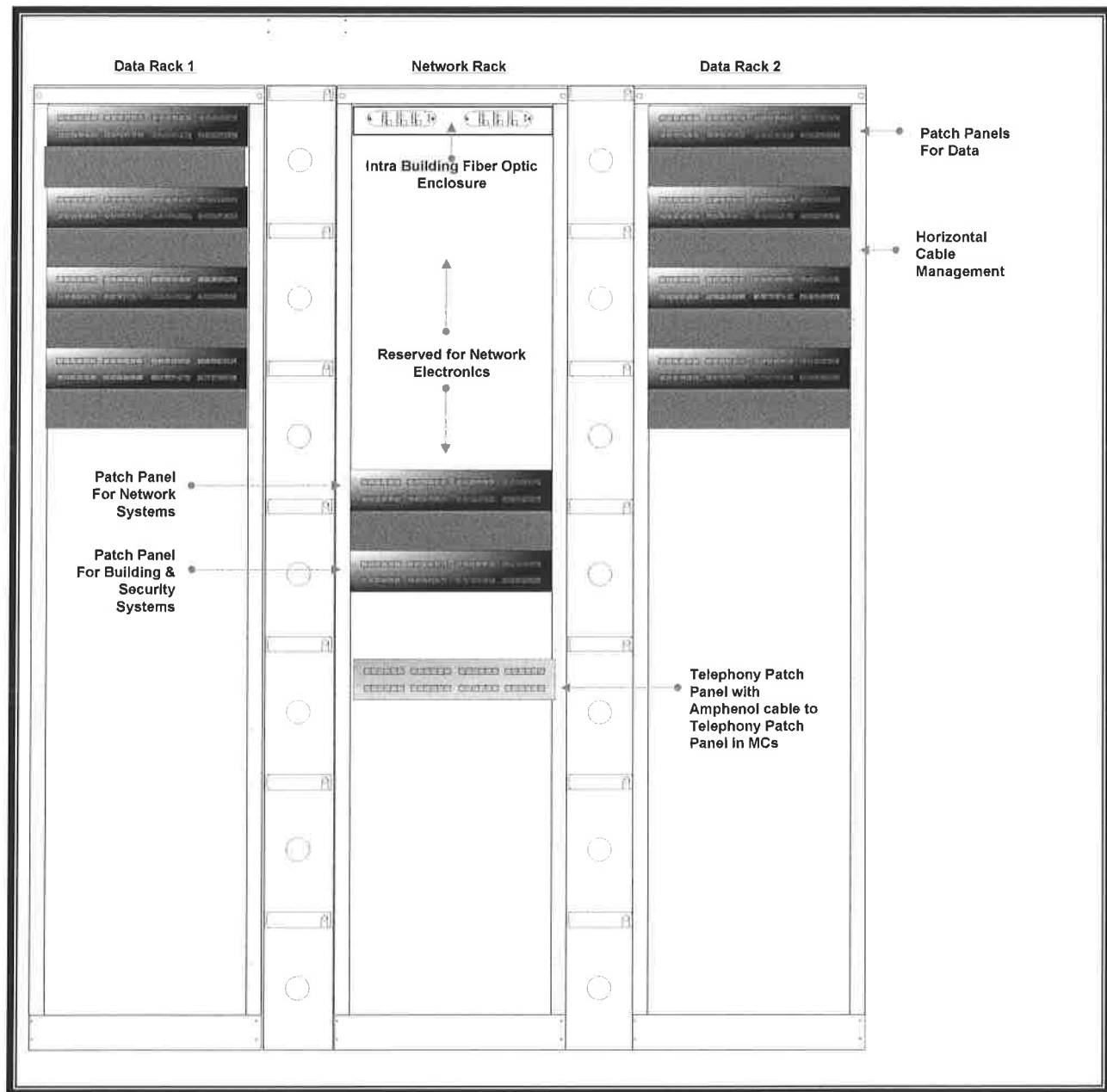


Figure 6: Sample MC Rack Layout



**Figure 7: Sample HC Rack Layout**

## **Article X. Cable Pathways**

### **Section 10.01 General**

All cable pathways and spaces must be in compliance with TIA/EIA-568-C.1: Commercial Building Telecommunications Cabling Standard Part 1: General Requirements and TIA/EIA-569: Commercial Building Standard for Telecommunications Pathways and Spaces.

Cable paths shall consist of a primary path above the main hallways of the building with individual drops exiting the main pathways at right angles and suspended by J hooks towards the top of the wall above the intended drop/faceplate location.

In areas with suspended ceiling tiles, all cabling and support structures should be installed above the ceiling tiles in such a way that will not interfere with the moving or removal of ceiling tiles.

Specific attention should be paid to issues such as:

- Distance requirements for separation from EMI emitting devices and electrical equipment such as fluorescent lighting and power supplies.
- Proper supporting of cables within cable paths to prevent the weight of cables from damaging cable or other equipment.
- Proper conditioning of floor and wall penetrations to prevent damage to cable jackets while installing the cable and throughout the cable life.
- Segregation and separation of cabling in cable trays by media type and then by color of jackets for like media.

### **Section 10.02 Caveats**

All penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with National Fire Protection Association and state Fire Marshal requirements.

In no cases shall any cabling be permitted to utilize building infrastructure for support or to aid in the cables suspension. Only systems installed specifically for the purpose of routing and managing cabling shall be utilized.

### **Section 10.03 Abandoned Cables**

Abandoned cables increase fire loading unnecessarily and if installed in plenums, it can affect airflow. Therefore, as per paragraph 800.25 of the National Electric Code, the accessible portion of all abandoned communication cables shall be removed.

Prior to removal of any cables, the contractor shall coordinate with the LSUHSC Enterprise Networking and Facility Services representatives to ensure that cables will not be repurposed and shall be removed.

### **Section 10.04 Cable Trays**

Cable tray shall be installed in all primary pathways (i.e. hallways).

Cable trays shall be of a wire mesh construction and be a minimum of 4" deep and 12" wide. Fill rates should not exceed 60%.

All cable trays shall be properly grounded.

All cable trays shall be installed and secured as per the manufacturer's installation instructions.

No component of the cable tray system or support structure should be mounted to the suspended ceiling support wires.

### **Section 10.05 Cable Supports**

J-hooks shall be installed in areas where the installation of cable trays is not possible or to support cables between cable trays and user work areas.

The minimum J-hook size shall be 2". Larger sizes if necessary shall be determined based on manufacturer's recommendations for the number of cables to be supported.

All J-Hooks shall have cable retaining clips installed.

In main hallways, where possible, J-hooks shall be mounted to the wall and spaced every 4'. The distance between J-hooks in overhead areas shall not exceed 5'.

All J-Hooks shall be installed and secured as per the manufacturer's installation instructions.

### **Section 10.06 Conduits and Innerduct**

For conduit and innerduct installations, the following best practices should be adhered to:

- Innerduct should be cut and securely fastened at all conduit junction boxes
- All conduits shall use sweeping bends for directional changes
- All conduits, tubings and innerducts shall be securely terminated on both ends with appropriate termination hardware and junction boxes
- Transitions between different types of tubing, conduit and innerduct shall be made with a junction box unless a special adapter designed for such purpose is available
- All empty innerducts and unfilled conduits shall contain pull strings to assist with future cable installations
- Conduit shall have a maximum fill capacity of 50%
- Innerduct may be filled to any capacity that can be achieved with a single pull without damaging the integrity of the cables being installed
- Conduit and tubing shall terminate in junction boxes appropriately sized for the type and quantity of cable being installed
- When using conduit greater than 2" inner diameter, innerduct shall be used within the entire length of the conduit unless a shielded cable is used
- When 4" conduit is installed, it should be completely filled with innerduct

Conduits and Innerducts shall be clearly labeled on the exterior surface, at least every 50'.

Conduits and Innerduct labels shall include a unique ID that identifies the origination and destination, such as RCB719-LEC230-1 signifying the 1<sup>st</sup> conduit originating in the Resource Center Building, room 719, and terminating in room 230 in the Lions Eye Center.

Labeling shall consist of black letters, at least 1.5" – 2" high, on a white or yellow background. Labels should be self-adhesive labels suitable for indoor and outdoor installations.

Conduit sizing shall be based on cable capacity as per the manufacturer's recommendations.

Conduit installations in areas where the presence of an electrolyte, such as water or moisture containing small amounts of acid are likely to be present, appropriate measures shall be taken to ensure that dissimilar metals do not come in contact with one another in order to prevent corrosion of metals.

Refer to the table 2 below regarding metals that corrode when in the presence of an electrolytic and in contact with another metal.

The Galvanic Series			
1	Aluminum	7	Tin
2	Zinc	8	Lead
3	Steel	9	Brass
4	Iron	10	Copper
5	Nickel	11	Bronze
6	Stainless Steel 400 Series	12	Stainless Steel 300 Series

**Table 2: The Galvanic Series**



## **Article XI. Fiber Optic Cabling**

### **Section 11.01 General**

All fiber optic backbone cabling shall be installed in a star topology in compliance with TIA/EIA-568-C.1: Commercial Building Telecommunications Cabling Standard Part 1: General Requirements.

Fiber installation must also comply with TIA/EIA-568-C.3: Optical Fiber Cabling Components Standard.

### **Section 11.02 Caveats**

All fiber optic cables must be installed, handled, routed and terminated as per the manufacturer's installation instructions. Special attention shall be paid to the pulling tension and bend radius limitations for each cable.

### **Section 11.03 Splice Points**

LSUHSC has established two splice points on the downtown campus, each having available single-mode fiber optics, to the Resource Center Building which acts as the hub in the downtown campus star topology.

Splice points are established in the following locations:

- East end of Walk-to-Wellness
- West end of Walk-to-Wellness

All new building construction on the downtown campus shall attempt to utilize these existing resources.

### **Section 11.04 Installation Techniques**

Fiber optic cabling must be completely encapsulated for the entire length of the cable run. Acceptable encapsulation types are aluminum armor cladding, innerduct, rigid metallic conduit, electrical metallic tubing, flexible metallic tubing, or other suitable enclosure that meets the requirements of the installation.

Different types of encapsulation materials may be required in different areas to accommodate intra-building, inter-building, or plenum space requirements.

Grounding requirements shall be adhered to for each applicable encapsulation type.

### **Section 11.05 Service Loops**

All cables shall be provided with a 25' long service loop per end for a total of 50' per cable.

Service loops shall be securely mounted to the wall in the cross-connects.

### **Section 11.06 Inter-building**

All new inter-building backbone cabling shall consist of a minimum of 24-strands of single-mode fiber optic cabling.

Inter-building fiber shall be indoor/outdoor rated fiber.

Depending upon the geographic location of the building being served, as well as its logical relationship to the campus environment, the number and type of strands may be increased.

#### **Section 11.07 Intra-building**

All new intra-building riser cabling shall consist of a minimum of 24 strands of laser optimized OM4.

#### **Section 11.08 Termination**

All single-mode and multimode terminations shall have SC connectors.

#### **Section 11.09 Testing**

Each fiber strand shall be tested with an OTDR to verify installed cable length and all points of dB loss.

OTDR must have been calibrated within past year by an ISO 9001:2008 accredited lab or by the original equipment manufacturer. Certification of last calibration date shall be made available upon request.

Fusion splice loss shall not exceed 0.2 dB and connector loss shall not exceed 0.5 dB.

Testing shall be performed in both directions on each strand.

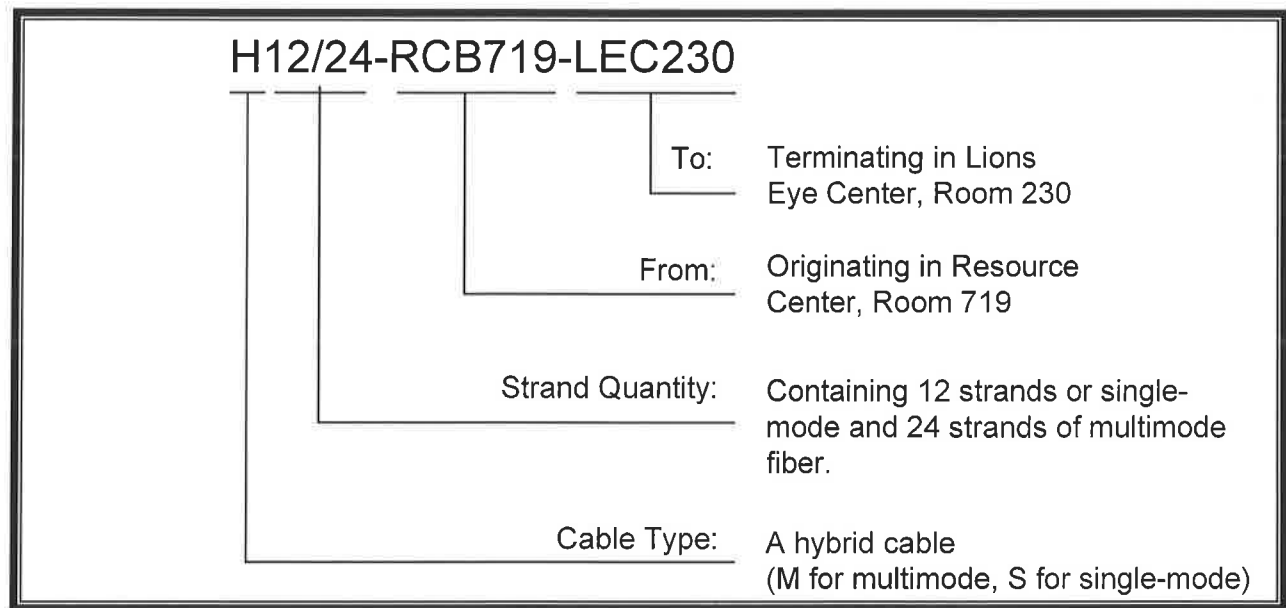
#### **Section 11.10 Labeling**

All Fiber Optic Cables shall have a self-laminating plastic fiber optic cable tag affixed with tie wraps (plenum or non-plenum as necessary) every 50' unless it the cable is encapsulated in a conduit or innerduct.

All fiber Optic Cables shall have a cable tag affixed before the cable enters any conduit or innerduct and within any pull box, junction box, or hand-hole where the fiber is exposed.

Fiber Optic cable tags shall include a unique identifier (ID) neatly printed in a permanent marker.

This ID shall be constructed in such a way as to easily identify the type of fiber optic cable, strand count and origination cross-connect and destination cross-connect. Refer to Figure 8 for a sample fiber optic identifier.



**Figure 8: Fiber Optic Identifier**

## **Article XII. UTP Cabling**

### **Section 12.01 General**

All UTP cabling components, including cables, connectors, and patch cables, must exceed the ANSI/TIA Category 6 standard.

TIA/EIA 1179 recommends that Healthcare Facilities install Category 6a.

Standard colors for UTP Cabling have been adopted to easily identify cable usage.

### **Section 12.02 Caveats**

All UTP cables must be installed, handled, routed and terminated as per the manufacturer's installation instructions. Special attention shall be paid to the pulling tension and bend radius limitations for each cable.

UTP Cabling shall not be painted (oil or water based) or be installed in the presence of water.

UTP cables shall not be spliced.

### **Section 12.03 Penetrations**

All penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with National Fire Protection Association and state Fire Marshal requirements.

If conduit is not provided to the outlet box location, all penetrations through office wall top plates should have a collar or similar device installed to prevent damage to the UTP cable jacket.

### **Section 12.04 Horizontal UTP Cables**

The maximum length of a horizontal UTP cable, between the faceplate in the work area and patch panel in the HC, shall not exceed 295'.

All cables should terminate at a patch panel in the cross-connect and at a faceplate on the same floor as the work area being served.

UTP Cables shall be colored to easily identify usage as specified in Table 3.

### **Section 12.05 Modular Connectors**

Modular connectors shall (as close as possible) match the color of the UTP cable as specified in Table 3.

### **Section 12.06 Patch Cables**

The maximum length of a patch cable in the work area shall not exceed 16'.

The Contractor shall provide appropriately sized patch cable for all cross-connect drops. Patch cables shall be sized to minimize excess cable length in the vertical managements.

The patch cables shall (as close as possible) match the color of the modular connector as specified in Table 3.

<b>UTP Cable / Modular Connector / Patch Cable</b>	<b>Usage</b>
Blue / Blue / Blue	Primary Data
Blue / Blue / Blue	Spare Data
Violet / Violet / Violet	Special Purpose – Networking
Orange / Orange / Orange	Special Purpose – Building Systems
Green / Green / Green	Special Purpose – Passive PoE

**Table 3: UTP Cable / Modular Connector and Patch Cable Color Code**

## **Section 12.07 Faceplates**

The color of the faceplates shall match wall colors and shall support a minimum of four modular jacks.

Faceplates mounted on walls shall utilize recessed insert and non-shuttered jacks, installed in a downward facing orientation to prevent the accumulations of dust and debris within the modular jack and on the pin contacts. Installations shall be such that the bottom of the faceplate is parallel to the floor surface and the sides of the faceplate are perpendicular to the floor surface.

All unused Faceplate ports shall have blank inserts installed.

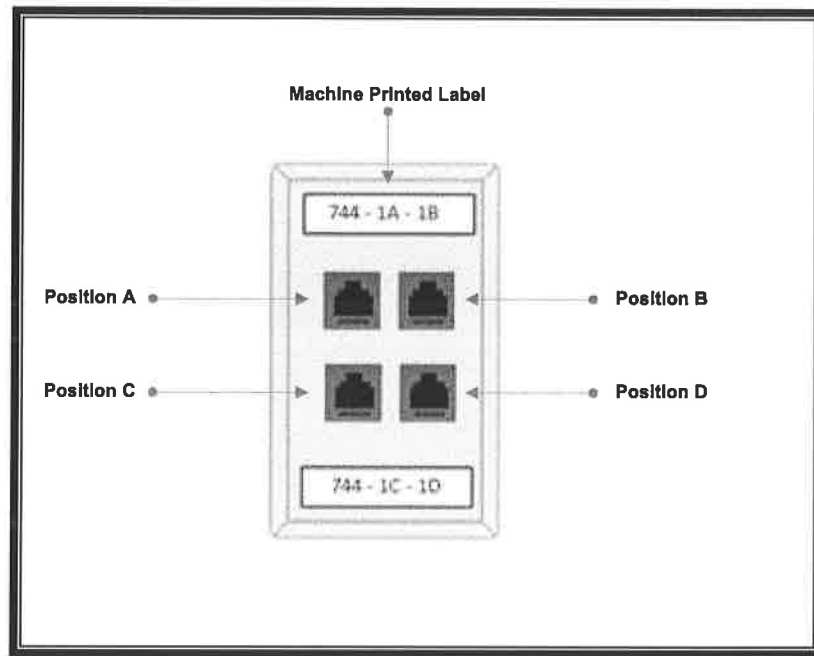
Faceplates mounted on horizontal surfaces shall include shuttered modular jacks to prevent the accumulation of dust and debris within the jack and on the pin contacts.

Faceplates shall be separated from Electrical outlets by a minimum of 6”.

Faceplates shall have machine printed labels and plastic label covers. Labels shall be in compliance with TIA/EIA-606 The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings, Section 8, Labeling and Color Coding.

Faceplates in work areas shall be labeled with the room number, jack number, and the jack position. Refer to Figure 9 for jack positions. If multiple faceplates exist within the same room, faceplates jack numbers shall be sequentially numbered in a clockwise manner. This should begin with the first faceplate to the left of the main doorway as you enter the room. The main doorway is the one that provides access to a common area, such as a hallway or lobby.

Faceplate labels in office work areas shall be white with black lettering. Faceplate labels in public areas (i.e. auditoriums, conference rooms, etc) shall be green with black lettering. LSUHSC Enterprise Networking shall determine areas that are to be considered public areas for the purpose of labeling.



**Figure 9: Faceplate Jack Positions**

Faceplates for Special Systems shall be labeled with the room number, system code and jack number. Refer to Table 4 for defined system codes

Name of System	Abbreviation
Access Points	AP
Digital Signs	DS
Environmental Monitoring Systems	ENV
Access Controls	AC
Security Systems (Cameras, DVR, etc)	SEC

**Table 4: System Codes**

### **Section 12.08 Cable Bindings**

Cable bindings (straps, tie wraps, etc) should be irregularly spaced and should be loosely fitted (easily moveable).

### **Section 12.09 Terminations**

All UTP cable runs should be terminated using modular connectors on both ends.

Eight position jack pin/pair assignments will comply with T568A designation identified in TIA/EIA-568-C.2 Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components

### **Section 12.10 Testing**

All testing shall be in compliance with TIA/EIA-568-C.2 Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components

All UTP cables shall be tested to meet or exceed Category 6 requirements, including Attenuation, Near End Cross Talk, Power Sum NEXT, Equal Level Far End Cross Talk (ELFEXT), Power Sum ELFEXT and Return Loss.

All test result must PASS.

A MARGINAL PASS test result is not acceptable.

Certification of last date and time of calibration to manufacturer's requirements for all test instruments shall be made available upon request.

Any test instrument utilized must be compliant and shall not allow marginal results to be hidden.

Test results shall be saved and submitted electronically to the building owner and LSUHSC Office of Computer Services upon completion of the installation. Format for electronic submission of test results shall be in a file format mutually agreed to by the contractor and LSUHSC Office of Computer Services.

### **Section 12.11 Documentation**

Documentation shall be submitted in mutually compatible electronic format and must include:

- As-built drawings depicting the path of all backbone and vertical cabling as well as the primary path cable trays for horizontal cabling.
- As-built documentation of all floor plans for HCs including physical location of racks, trays and penetrations.
- A logical representation of each patch panel including the corresponding labeling.
- Test results for every fiber optic and UTP cable installed. The test results shall be submitted in a mutually agreeable electronic format.

### Section 12.12 Standard Drop

A standard drop shall consist of two blue Category 6 cables. Corresponding faceplate shall have two blue modular jacks oriented as follows:

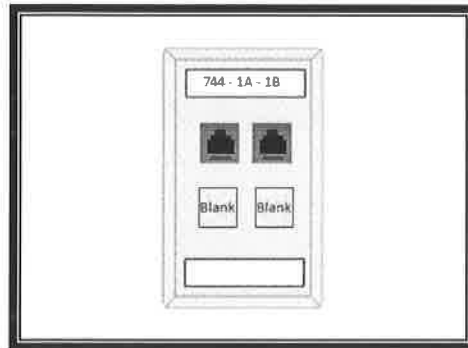


Figure 10: Standard Drop

### Section 12.13 Non-Standard Drop

A non-standard drop in a typical office area may consist of one or as many as four blue Category 6 cables. Corresponding faceplates shall have the corresponding number of blue modular jacks oriented as follows:

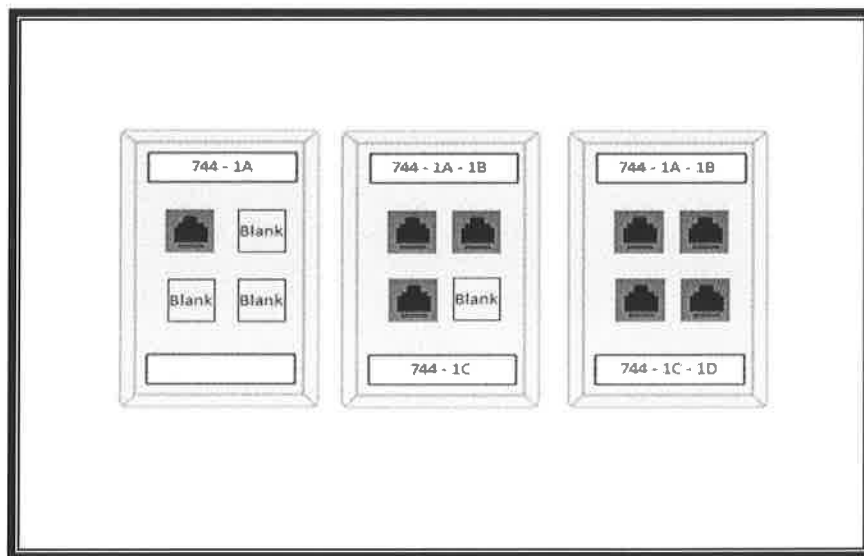


Figure 11: Non-Standard Drop Options



## Section 12.14 Special Purpose Drops

The following special purpose drops have been identified:

(a) AP Drop

An AP drop shall consist of one purple Category 6 cable. Corresponding faceplates will have one purple modular jack color oriented as follows:

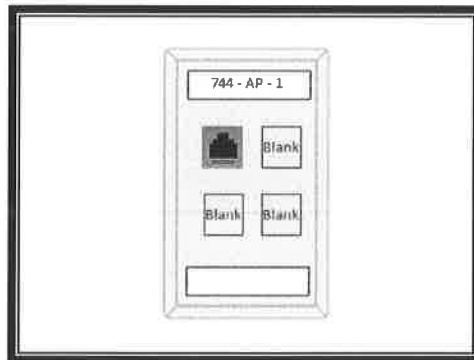


Figure 12: AP Drop

(b) Digital Sign Drop

A Digital Sign drop shall consist of three purple Category 6 cables. Corresponding faceplates will have three purple modular jacks oriented as follows:

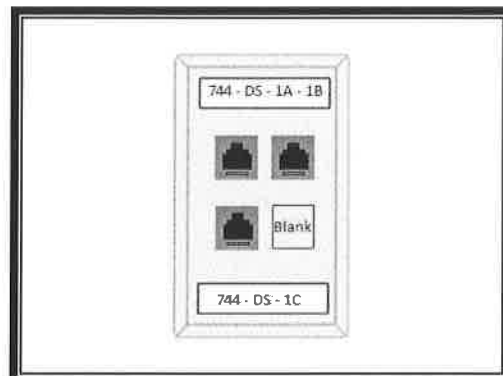
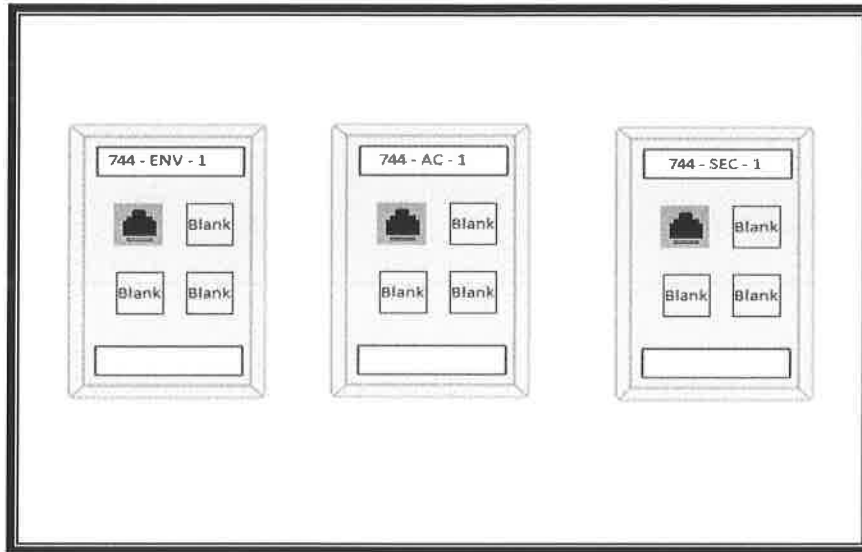


Figure 13: Digital Sign Drop

(c) HVAC, Access Control, and Security Appliance Drops

All HVAC Environment Monitoring Drops, Access Control System Drops and Security Camera/DVR drops shall consist of a minimum of one orange Category 6 cable. Corresponding faceplates will have one orange modular jack oriented as follows:



**Figure 16: HVAC, Access Control and Security Appliance Drops**